







# Contents

3	The History of the Osaka Gas Group  A Path of Growth in Step with Our Customers		
5	The Osaka Gas Group Today Business Development Based on Management Principle		
7	Message from Top Management Chairman Hiroshi Ozaki and President Takehiro Honjo		
9	The Future of the Osaka Gas Group Ahead to FY2030		
11	Initiatives to Achieve What We Aim to Be in FY2030 Medium-term Management Plan 2020		
15	Interview with the President President Takehiro Honjo		
23	Financial Data / Non-Financial Data		
25	Energy Value Chain of the Osaka Gas Group		
27	Business Segments		
	27 Domestic Energy Business		
	33 International Energy Business		
	37 Life & Business Solutions (Non-Energy Business)		
41	Technological Development		
43	Corporate Social Responsibility (CSR) Activities		
45	Corporate Governance		
49	Osaka Gas Group Organization		
50	Financial Section		
	51 Summary of Consolidated Operating Results 62 Consolidated Statements of Comprehensive Income		
	53 Management's Discussion and Analysis 63 Consolidated Statements of Changes in Net Assets		
	59 Consolidated Balance Sheets 65 Consolidated Statements of Cash Flows		
	61 Consolidated Statements of Income		
66	Major Consolidated Subsidiaries		
67	Reference Materials and Business Environment		
69	Company Data		

# The History of the Osaka Gas Group

# A Path of Growth in Step with Our Customers

# Overcoming Difficulties With Our Corporate Motto "Service First"

The Osaka Gas Group's gas business began in an earlier age with gas lamps. As society evolved and lifestyles changed, the company went through numerous trials, but persevered through a commitment to customers based on "Service First," developing uses for gas in cooking, hot water, heating, and more.









1900 1960

# A Strong Relationship with Our Customers is the Source of Our Corporate Value

We have built a strong relationship with customers by working closely with localities and customers themselves, and by providing products and services that meet their needs. We use that strong support as a basis for expanding into new territories, from gas into electricity and home services to further boost our corporate value.

- 1897 Osaka Gas Co., Ltd. established with capital of ¥350,000
- 1905 Iwasaki Plant established; gas supply begins (3,351 customers by year end)
- **1924** Cooking classes at the head office begin
- **1933** Construction of Osaka Gas Building completed
- Operations begin at Torishima





Iwasaki Plant (currently Nishi-ku, Osaka)



- 1970 Japan's first regional heating and cooling business begins in the Senri-Chuo area
- **1971** Operations begin at Senboku
- 1972 Company joins fuel cell target plan Importing of LNG from Brunei begins
- **1975** Natural gas conversion begins (from 4,500 kcal/m³ to 11,000 kcal/m<sup>3</sup>)
- **1977** Operations begin at Senboku LNG Terminal II
- **1979** Operations begin at world's first cold energy power generation plant



Senboku Plant at start of operations (Osaka Prefecture)

1971 3 million households

Osaka Gas Building

Number of gas meters installed

Gas sales volume

1900

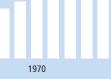
1920

1940

1950

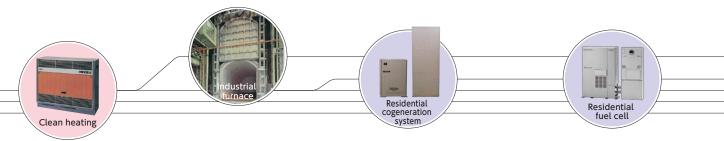
1960

958 1 million households

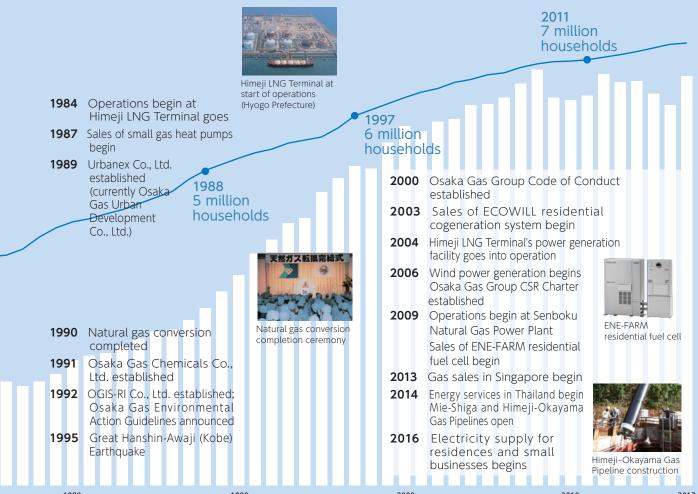


The Osaka Gas Group began supplying city gas in 1905. We have done business for more than 110 years, evolving over more than a century of modernization and societal transformations, thriving to become the corporation we are today. One thing we have always done is put the customer first and strived to meet their demands. At the time of our founding, our customers numbered 3,000 households. Today that number stands at about 7.3 million\*. The Osaka Gas Group has now grown and diversified beyond the gas business to the electric power business and home services, and we supply a wide range of products, services, and solutions.

\* Number of gas meters installed



1980 2000



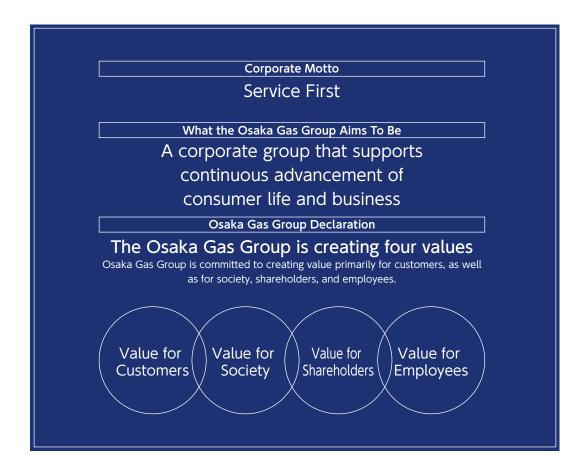
1980 1990 2000 2010 2017

# The Osaka Gas Group Today

# Business Development Based on Management Principle

The Osaka Gas Group has established a management principle that consists of: Our Corporate Motto, What the Osaka Gas Group Aims To Be and the Osaka Gas Group Declaration. We carry out our business activities based on these cornerstones to create four types of value.

# Osaka Gas Group Management Principle



[ Corporate Motto ]

[ What the Osaka Gas Group Aims To Be ]

# Service First

The "Service First" corporate motto of the Osaka Gas Group represents a stance of faithfully engaging in actions to benefit customers and society. To put service first means asking, "Is there anything we can do to be of more use to customers?" We value such a proactive and attentive approach, in combination with a bold spirit of promoting new initiatives that extend beyond existing frameworks.

A corporate group that supports continuous advancement of consumer life and business

As business fields extend beyond regional and national borders and global competition becomes more intense, we build strengths that have international currency by engaging in new challenges. We consistently value our close working relationships with customers and aim to further raise the quality of consumer life and business. That is the essence of being a corporate group that strives to be useful and aid in advancing progress.



# Business Development Based on Our Strengths

One strength of the Osaka Gas Group is a reliable business infrastructure that is well-established locally; another is the ability to provide a stable and safe energy supply. We have built solid relationships with customers based on these strengths, and develop our business to make best use of them.

# The Specialized Strengths of the Osaka Gas Group

# Relationships with **7.3** million customers\*1

Based on procurement and supply capabilities to ensure a safe and stable supply of energy, we work face-to-face with customers to provide optimal gas appliances, equipment, and services. That is how we built relationships with our approximately 7.3 million customers."

\*1: Number of gas meters installed

Robust Sales Infrastructure Connected to Communities

# **Community Activities**

Our service chain partners and Osaka Gas personnel work directly with customers to sell gas appliances and offer maintenance services and solutions.



# Energy Solutions Capabilities, Proposals and Customization

We offer our industrial customers services ranging from equipment improvements to maintenance, such as through energy-saving diagnoses and the development of burners using proprietary technologies developed by Osaka Gas.



# Development Capabilities for Gas Appliances and Equipment

We have developed the world's most efficient fuel cells'², along with various gas appliances and equipment that meets our customers' needs, including cogeneration systems and air conditioning systems.



## The Safe, Stable Supply of Energy

# Distribution Network Care and Maintenance

We manage and maintain a total of 61,666 km of pipeline, primarily in the Kansai region and ensure safety all the way from our production facilities to customer's gas equipment.



### **Stable LNG Procurement**

We have long-term contracts with eight producer countries, manage our own LNG carriers, and ensure a stable supply of LNG from diverse suppliers.



### **Our Own Power Sources**

We own our own power plants that run on natural gas and coal, as well as renewable energies such as solar and wind power, totaling approximately 1,880 MW of power.



\*2 World's highest power generation efficiency of 52% using a household fuel cell with a rated power output of 1 kW or less (Calculated using the lower heating value; source: Osaka Gas, as of February 24, 2016)

# **Aiming for Continuous Advancement**



Chairman Hiroshi Ozaki

President Takehiro Honjo

# **Our Commitment**

To evolve into an innovative energy and service company that continues to be the first choice of customers and achieve sustainable growth

To maximize value for all stakeholders

We are delighted to extend our warmest greetings to all stakeholders as we issue this Annual Report 2017.

Competition in energy markets has intensified due to the broadened parameters introduced by the full deregulation of the retail electricity market last year and full deregulation of the gas market in April of this year. Meanwhile, uncertainty and a lack of clarity in the global economic and social landscape is making it difficult to predict how the business environment will develop as we go forward.

Nevertheless, the Osaka Gas Group has faced and survived numerous trials in its history dating back to 1905, taking on and overcoming significant challenges. We aim to continue evolving into a top-tier energy and service company capable of meeting the needs of each new generation with flexibility to achieve sustainable growth.

In March of this year, we announced our long-term management vision for 2030, which lays out what we aim to be in FY2030, and our Medium-term Management Plan 2020, which provides the strategies and business indexes for meeting long-term goals. Together they were announced as "Going Forward Beyond Borders."

We have consistently valued our relationships with customers, and we aim to further strengthen those ties to deliver high-quality services. We consider such relationships to be the source of our strength in the effort to continue evolving and advancing.

We foresee even further significant changes to come in the environment surrounding the Osaka Gas Group. While it is important to recognize and respond swiftly to changing social needs, requiring some internal aspects to be changed, other things need to remain unchanged. We need to remain faithful to our spirit, backed by our corporate philosophy. Where we can be more flexible is in our strategies and actions, responding with competence and agility to business imperatives. We need to seize new business opportunities amidst the change and be bold in taking on challenges so that we miss no opportunities. In carrying out business activities we place top priority on creating value for customers, which in turn leads to the creation of value for society, value for shareholders, and value for employees.

Thank you for your continued support and encouragement.

July 2017

Chairman

Hiroshi Ozaki

President



Takehiro Honjo

## The Future of the Osaka Gas Group

# Ahead to FY2030

Long-Term Management Vision for 2030

# Becoming an innovative energy & service company that continues to be the first choice of customers

The Osaka Gas Group has newly created its long-term management vision for 2030. Dramatic changes have occurred in the business climate mainly due to the full deregulation of the domestic energy market. We are looking upon this change as an opportunity to become an innovative energy & service company that continues to be the first choice of customers. Our aim is to contribute to the advancement of society, communities, and customers by going beyond customer expectations and business boundaries and corporate boundaries.



Three Guiding Principles for FY2030

# Three Guiding Principles for Achieving Our Long-Term Management Vision Based on the Osaka Gas Group Corporate Philosophy

- Continue providing the high-quality services we have developed in the Kansai area to as many customers as possible
- Expand areas to conduct business in
- Enhance businesses and services that make effective use of the Group's strengths
- Always strive to be professionals who pursue innovative challenges
- Ensure a higher level of security and stable supply
- Innovative product/technological development and engineering
- Constantly winning the confidence of investors, corporate partners, employees, and society
- Promote portfolio management
- Enhance competitiveness by further improving business efficiency
- Pursue management that is conscious of the ESG global standards
- Establish organizations and workplaces in which all Group employees can conduct business activities in good health

#### What We Aim to Be in FY2030

We will attempt to triple our FY2017 consolidated ordinary income by expanding both international and domestic business.

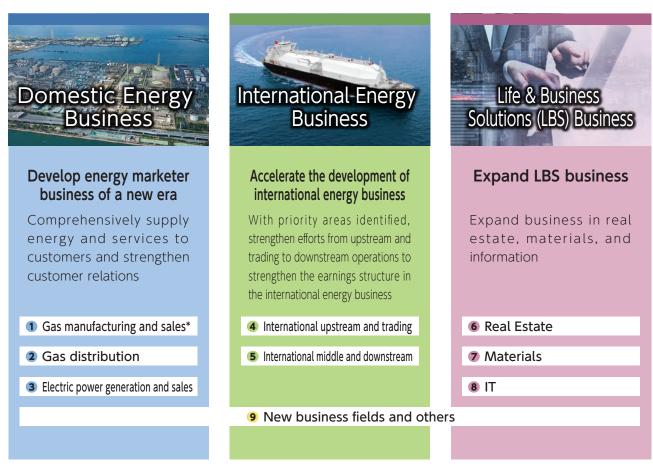
- \*1 At oil price of \$55/barrel; exchange rate of ¥115/\$1
- \*2 At oil price of \$70/barrel; exchange rate of ¥115/\$1
- \*3 Consolidated ordinary income base
- \*4 Life & Business Solutions
- \*5 Gas business income includes equipment sales, LNG sales, etc.

LBS\*4 Business Percentage Gas Business\*5 FY2017 of Domestic **Business** Consolidated ordinary income\*1 ¥64 billion **Electric Power Business** Domestic International Domestic business business business business International business

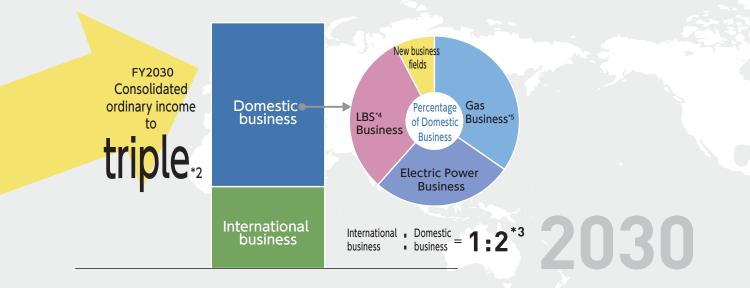
#### What We Aim to Be in FY2030

# Strengthen 9 Business Areas in 3 Core Business Domains

Working toward FY2030, the Osaka Gas Group will strengthen nine business areas in three core business domains. We will also implement portfolio management to be better able to cope with the increasing uncertainties of the future.



<sup>\*</sup> Includes equipment and service sales, LNG sales, etc.



# Initiatives to Achieve What We Aim to Be in FY2030

In order to become what we aim to be in FY2030, we will develop as a new era energy and service company to meet the energy needs of a new era by going beyond customer expectations, business boundaries and corporate boundaries.

We will continue to earn the trust of stakeholders by strengthening our management structure and improving our workplace environment.

# Go beyond customer expectations, business boundaries and corporate boundaries

Develop energy marketer business of a new era	<ul> <li>Expand energy-related services and expand outside of the Kansai area to maximize customer accounts through efforts that go beyond customer expectations, business boundaries and corporate boundaries.</li> <li>Expand the volume of our natural gas business (including LNG) both inside and outside Japan through retai and energy services, power generation, trading, etc.</li> <li>Build a competitive power supply portfolio both inside and outside Japan that includes procurement from the market and other companies.</li> </ul>
Accelerate the development of international energy business	▶ We are expanding our businesses across the entire value chain from upstream to downstream by leveraging the know-how we have developed in Japan and the international business bases we have established so far, focusing mainly on the priority areas including North America, Asia and Oceania.
Evnand I BC business and	☑ Real estate: Expand business in the Tokyo area as well as in the Kansai area
Expand LBS business and	Materials: Play a leading role in niche markets mainly overseas
developing new business fields and others	<ul> <li>☑ IT: Provide new value by advanced ICT* innovation</li> <li>☑ New business fields: Develop new businesses in the peripheral fields of energy businesses (through M&amp;A, etc.)</li> </ul>
Growth investing and M&A	■ To achieve what we aim to be, we are investing in quality improvement, business growth and M&A, targeting a cumulative total of 2 trillion yen by FY2030.
Innovation that goes beyond customers' expectations	▶ By introducing advanced technologies and latest techniques as well as applying the capabilities we have developed in ICT* utilization, engineering and technology development, we are continuously providing products and services that go beyond customer expectations.

\* Information and Communication Technology

# Management that wins confidence of stakeholders (environmental contributions, CSR, etc.)

As a corporate group engaging in business globally, we are promoting our CSR commitment and ESGconscious global standard management.

Environment-conscious Management	<ul> <li>Support customers in introducing high-efficiency energy equipment (fuel cells, CHP, etc.), and provide them with energy services</li> <li>▶ Promote fuel conversion to natural gas, a clean energy source, and introduction of energy-saving technologies</li> <li>▶ Develop and introduce leading-edge thermal power plants and renewable energy (bio, wind, solar, etc.)</li> <li>▶ Promote environmental management focusing on resources recycling, biodiversity, chemical substances safety, etc.</li> </ul>	Contribute to CO2 reduction of approx.  70 million tons in total for the period between FY2017 and FY2030 (equivalent to approx.  2% of the national reduction target)  * Including contribution to reduction at customer sites and overseas		
Society-conscious Management	<ul> <li>▶ Pursue activities in accordance with international norms, such as the Global Compact</li> <li>▶ Promote activities relevant to the entire value chain including initiatives to protect human rights</li> <li>▶ Engage in co-creation with local communities (social design activities, community communication activit community building, etc.)</li> </ul>			
<b>G</b> overnance Enhancement	<ul> <li>▶ Promote dialogues with stakeholders</li> <li>▶ Disclose ESG information in accordance with global standards</li> <li>▶ Enhance diversity of employees and executives</li> </ul>	☐ Take measures to ensure information security ☐ Pursue fair business practices		

# Work-Style Reforms and Human Resource Development to Boost Productivity

To continue to be sound as a corporate group, we will hire individuals who bring diverse values to the table; we will create a workplace in which our employees feel motivated and proud to work; and we will encourage highly productive and highly creative work styles. We will raise awareness, reform work styles, and improve the environment to keep the Osaka Gas Group healthy and sound.

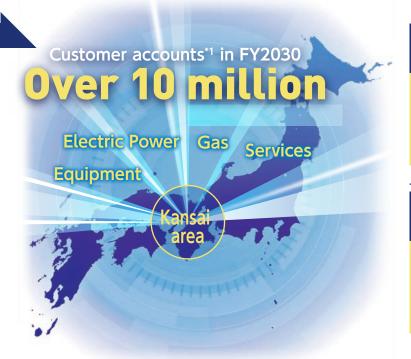
Attitude Reform

Work-Style Reform

Work Environment Improvement



# **Provide Comprehensive Energy Supply and Services**



# **Go Beyond Customer Expectations** and Business Boundaries

- Expand the electric power and LPG businesses in addition to city gas
- Expand life support services for more comfortable living
- Provide one-stop services of Utility Agent\*2

# Go Beyond Corporate **Boundaries**

- Broadly deploy the know-how and services (energy & services) developed in the Kansai area through expanded alliances
- Promote new business development (M&A, etc.) in the energy peripheral fields

- \*1 Total number of contracts, including city gas, electric power, LPG, ENE-FARM, Sumikata Services (home services), Utility Agent contracts, etc.
- \*2 Trademark registered by OGCTS Co., Ltd. and Osaka Gas Co., Ltd. under which utility facilities (gas, electricity, water, etc.) are provided to customers for one-stop service, from maintenance and management services to energy procurement.

#### Gas (including LNG) sales and trading Electric power generation and sales Scale of natural Power supply portfolio 17 million tons 9,000 MW\*2 gas business (inside and outside Japan) ■Trading\*1 9.60 million tons Power generation (inside and outside Japan) Overseas 3,280 MW Retail and wholesale Renewables energy (inside and outside Japan) ■Thermal power FY2016 (forecast) FY2030 \*1 Including LNG sold to energy business operators inside and outside \*2 The ratio of procurement from markets and other companies will continue to be Japan, and LNG used in operations of overseas LNG terminals considered, depending on the situation of system design by the national government Growth investing and M&A Quality improvement investing ■ Domestic energy ■International energy ■LBS Domestic energy Total:640.3 billion yen Total:386.1 billion yen FY2009-2016 FY2009-2016 (8 years) (8 years) (80 billion yen/year) (48.2 billion yen/year) Total: 550 billion yen FY2017-2030 FY2017-2030 (14 years) (14 years) (39.2 billion yen/year) Total: 1,450 billion yen (103.5 billion yen/year)

# Medium-term Management Plan 2020

The Medium-term Management Plan 2020 was created to cover the period from FY2017 to FY2020 in line with the direction provided by the Group's Long-term Management Vision 2030.

We aim to supply comprehensive energy and services in the domestic energy business, and hope to continue being our customers' number one choice for energy. We also plan to strengthen our international energy business and Life & Business Solutions, and we aim to achieve our earnings targets by improving profitability.

# Solutions for Residential Customers

Figures are targets for FY2020

#### [ Contact with customers ] (Osaka Gas Group, alliance, Web, ICT. etc.)

- Solve customers' problems through Osaka Gas service chain partners and offer customers optimal solutions
- Increase number of subscribers to the members-only website "My Osaka Gas"

#### 1.3 million members

 Offer optimal solutions using ICT through the Contact Center

#### [ Equipment ]

 Accelerate ENE-FARM product development and dissemination

#### Total sales of 200,000 units

- Backfeed surplus electricity of ENE-FARM type'S to the grid and use it for the electric power business
- Expand advanced and energy-saving renovation
- Expand sales of value-added equipment to increase equipment sales revenue
- Make gas equipment IoT-compatible\*1 for remote monitoring, failure prevention, and customized services
- \*1 Internet of Things

#### [ Services and prices ]

- Offer reasonable prices for gas and electricity as a package
- Expand Sumikata Service (home service) offerings and increase revenue
- Further raise the quality of security and maintenance and provide services that go beyond customers' expectations

On-time completion rate: 88%\*2 Overall satisfaction: 94%\*3

- \*2 Percentage of completion of repairs on the day desired by customers
- \*3 Combined total of "Good" and "Very Good" questionnaire responses

# Solutions for Commercial and Industrial Customers

Figures are targets for FY2020

Domestic Energy

Business

# [ Contact with customers ] (Osaka Gas Group, alliance, Web,

- The Osaka Gas Group works with alliance partners to build customer relationships
- Expansion of subscribers to the "HelloOG!" members-only website

#### 50,000 members

 Respond to customers through the contact center based on their individual situations

#### [ Equipment ]

- Propose large-scale cogeneration systems for electricity/heat sharing and surplus electricity backfeeding
- Develop high-efficiency, low-cost gas air conditioning systems
- Offer Eneflex Premium, an energy-saving support service for air conditioning
- Offer fuel cells (SOFC) for industrial use in combination with electricity supply as a package

### [ Services and prices ]

- Expand pricing options to meet customers' needs (gas, electricity)
- Expand service options as a utility agent

#### [ Expansion of service area ]

 Utilize the technologies developed in the Kansai region for fuel conversion to natural gas and the adoption of cogeneration, etc., and offer comprehensive proposals for energy and services

# **Establishment** of Competitive **Power Supply Portfolio**

## [ Directions of electric power procurement ]

- Develop our own high-efficiency, competitive thermal power generation capabilities
- Expand renewable energy power sources · Promote biomass, wind, and solar power projects
- Procure power with a balance of competitiveness, environmental friendliness, and flexibility
  - · Flexibly use external power sources based on market price forecasts and supply/demand fluctuations

# Hime ji Natural Gas Power Generation

Construction of a new LNG-fired thermal power plant under review

Yamaguchi-Ube Power Generation Construction of a new coal-fired thermal power plant under review

- Major thermal power sources owned at present Major renewable power sources owned at present
- Inami Wind Power Generation Construction of a wind

#### Fukushima Gas Power New I NG-fired thermal power plant built

#### Nakayama Nagoya Joint Power Generation

Coal-fired generation capacity being expanded with 30% biomass-mixed combustion

power plant underway

\* Presented only the sources released to the press

# Development of Pipeline Network Operator **Business**

## [ Enhance security and disaster prevention level ]

- Enhance security level and pursue zero accidents
- · Improve emergency response standards · Continue operations with zero serious accidents
- Advance disaster response ·Subdivide supply outage areas

# ·Improve operations for pipe recovery from disaster

# Ensuring security and safety that supports our gas business [ Build facilities based on

#### long-term plan ] Develop high-voltage main

- line networks
  - ·Develop the Himeji East-West link pipe ·Study the possibility of developing an Amagasaki-Seishin Line
- Achieve safety improvement targets ·Complete the replacement of gray cast iron pipes by FY2024 ·Increase the rate of earthquake-resistant

pipes to 90% by FY2025

#### [Expand city gas]

- Promote collaboration with marketers and pipeline network development ·Improve convenience of "wheeling service"
  - Promote supply stability
  - ·Ensure neutrality and transparency



z	97				
			Plan for FY2017	Plan for FY2020	
		ROA	2.3%	3.5%	
Pi	Profitability index	ROE	4.5%	7.0%	
		EBITDA*1	157 billion yen	200 billion yen	
	Shareholder returns	Payout ratio	30% or higher*2		
	Financial soundness	D/E ratio	Approximately 0.7		
	index	Capital adequacy ratio	Around 50%		

\*1 EBITDA = operating income + depreciation cost + amortization of goodwill + equity in earnings/losses of affiliates

# Growth Investment and M&A (FY2017–FY2020) (Unit: billion yen) Domestic energy International energy LBS 200 214 106 Quality Improvement Investment (FY2017–FY2020) (Unit: billion yen)

# International Energy Businesses International Upstream, Midstream and Downstream Businesses

## [ North America ]

- Complete Freeport LNG Terminal (operation start in FY2018)
- Acquire new IPP projects and participate in the business with a sense of ownership
- Participate in gas businesses through which our know-how can be effectively utilized
- Acquire new upstream interests, mainly projects in production or in development/expansion phase

#### [ Southeast Asia ]

- Participate in new LNG terminal and IPP projects, promote expansion of retail business (fuel conversion, energy services, etc.)
- Further promote personnel shift by opening the Philippines Office and other measures

#### [ Asia and the Pacific ]

 Expand LNG procurement and sales mainly in Asia and the Pacific

#### [ Australia ]

- Successfully execute Gorgon and Ichthys Projects
- Acquire new upstream interests, mainly projects in production or in development/expansion phase

#### [Europe]

 Utilize existing assets and expand businesses to energy services, etc.

# Life & Business Solutions

# [ Leasing business ]

 Establish a structure for investment in new offices in the Tokyo area

#### [ Building management ]

• Enhance business by proposing services for energy savings, facility construction, etc.

## [ Kyoto Research Park ]

 Invite new tenants and develop a new building

# Materials

Real

Estate

#### [ Activated carbon ]

 Expand the global value chain through collaboration between Osaka Gas Chemicals and Jacobi

#### [ Preservatives ]

 Introduce anti-virus coating agent, etc., in addition to xyladecor

#### [ Fine materials ]

 Apply fluorene to multiple purposes in addition to optical lens resin

IT

- Create Group synergy and expand earnings by introducing new technologies (use of AI\* at call centers, detection of signs of abnormality using IoT, etc.)
- \* Artificial Intelligence

 Expand earnings from outside the Group mainly in the segments of finance, manufacturing and energy

# New Business Fields, Other

- Enhance the life services business in response to changes in the market environment, such as 24-hour fitness gyms operated by OG Sports (FITBASE 24)
- Seek new M&A opportunities and reorganize/reinforce existing affiliated companies in domestic and international energy businesses, LBS, and peripheral fields
- Set up New Business Development Dept. in July 2017

<sup>\*2</sup> Excluding short-term fluctuation factors

# Interview with the President



President Takehiro Honjo



# What are the highlights of the company's performance for the fiscal year ended March 31, 2017?

This was the year when the electricity retail market was fully deregulated, and in the meantime, a year in which we were preparing for the full deregulation of gas retailing, which took effect in April 2017.

In the gas business, our ordinary income was down 28.7% from the previous year to 96.2 billion yen due to the effect of significant decrease in time-lag profit. However, the actual ordinary income excluding the time-lag effect increased year-on-year. Also, our gas

sales volume increased and we have been steadily acquiring electricity contracts, so the company's performance is not as bad as the figures might suggest.

Nevertheless, the domestic energy market, including gas and electricity, is shrinking, and the full deregulation of gas retailing as an external environmental factor forces us to establish a business structure that can earn an even higher level of revenue to achieve sustainable growth.

#### Performance (Consolidated)

	2016.3	2017.3	Change	Percentage change
Net sales (billion yen)	1,322.0	1,183.8	-138.1	-10.5%
Operating income (billion yen)	146.6	97.2	-49.4	-33.7%
Ordinary income (billion yen)	134.9	96.2	-38.7	-28.7%
Profit attributable to owners of parent (billion yen)	84.3	61.2	-23.0	-27.3%
Time-lag gain/loss* (billion yen)	81.7	13.7	-67.9	_
ROA	4.6%	3.3%	-1.3	_
ROE	9.4%	6.6%	-2.8	_

<sup>\*</sup> The Fuel Cost Adjustment System in the gas business cause a gain or loss in profit due to the time lag between a change in LNG prices and its reflection in gas rate.

# Consolidated gas sales volume

45MJ/m <sup>3</sup>		2016.3 2017.3		Change	Percentage change
Non-	Residential	2,083	2,103	+19	+0.9%
lidated	Non-Residential	5,937	6,560	+622	+10.5%
Total gas sales volume (million m³)		8,021	8,662	+642	+8.0%
Consolidated gas sales volume (million m³)		8,052	8,694	+642	+8.0%

## Consolidated electricity sales volume

	2016.3	2017.3	Change	Percentage change
Number of low-voltage electricity supply (thousand)	_	305	_	_
Retail	_	995	_	_
Wholesale, etc.	<del></del>	7,954	<del>-</del>	<u> </u>
Total electricity sales volume (million kWh)	8,503	8,948	+445	+5.2%

# What are your thoughts on the state of the fully deregulated retail electricity and gas markets and your strategy going forward?

The domestic electricity retail market was fully deregulated in April 2016, and by the end of the year, Osaka Gas had gained over 300,000 customers in the residential electricity segment. This accomplishment far exceeded our target of 200,000 customers, resulting in the top share among new electricity providers in the Kansai area. I attribute the achievement to our face-to-face communication with our customers. Representatives from our nearly 200 Osaka Gas service chain partners in the gas supply area visited customers and carried out price simulations, carefully explaining the cost advantages of switching to Osaka Gas as a provider. This effort, I feel, coupled with a feeling of security is what has led to such a large gain in the number of electricity customers. The feeling of security based on our over 110 years of stable energy supply to the Kansai area is what has led to so many applications in the number of electricity customers.

Full deregulation of the gas retail market just began in April 2017, but I feel that competition in the Kansai area has grown incredibly fierce in a short period of time. If we are to survive, we must understand

customer's diverse needs and provide the best solutions. That is how we can increase the number of customer accounts and strengthen our ties to customers.

Osaka Gas has been providing customers with same-day completion of repairs and safety/security support services by utilizing our extensive equipment maintenance know-how. In May 2016, we began offering home services known as "Sumikata Services" as a one-stop solution for various problems that customers have, and we continue to expand the scope of those services.

In addition, this April we began providing a new service, "Sumikata Plus," offering unlimited call-outs for emergency repairs and other living support services for a fixed monthly rate for customers subscribing to our "Gas-Toku" plans such as "Motto-Wari." Committed to supplying added value to our customers, we will continue evolving into a next-generation energy marketer beyond being a one-stop shop for energy needs, aiming to be customers' number one choice.













Start of Service	Type of Service	
up to May 2016	Renovation, safety/security support	
May 2016	Plumbing repair	
July 2016	Air conditioning repair	
October 2016	Home repair, housecleaning, home water delivery	

# Please talk about the company's investment policy and cash flow.

As we aim to achieve our targets set for FY2030, we will carry out a growth investing and M&A strategy in our three core business domains, which will entail a cumulative total investment of 1.45 trillion yen over a 14-year period from FY2017 to FY2030.

In the domestic energy business, we will invest primarily in power generation facilities to expand our electric power business, which will include power sources based on natural gas, coal and renewables.

In the international energy business, we are already investing in the Ichthys Project, Freeport Project, and several IPP projects in the United States. We are also planning to participate in upstream and downstream projects in North America and Southeast Asia.

In Life & Business Solutions, we are investing in and pursuing M&A in real estate, IT and materials.

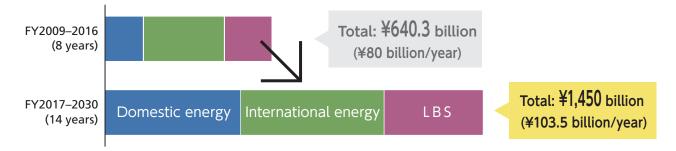
Additionally, we will be investing in the development of new businesses other than the above three domains.

In terms of the balance between growth investing and free cash flow, we will be carrying out investment plans in the international energy business and in large-scale power plants from 2016 to the first half of the 2020s, during which our growth investing is projected to exceed our free cash flow.

Starting around the mid-2020s, however, returns from our growth investments are expected to increase, resulting in much larger free cash flows than our growth investments.

Overall, between FY2017 and FY2030, we expect that our free cash flows will surpass our growth investments.

\* Free cash flows = Cash flows from operating activities - Quality Improvement Investing



# Please speak about investment risk management.



As we continue to pursue growth investing to achieve sustainable growth, we will be managing risks with greater care than ever by ensuring the following four points.

The first point is to confirm an investment from the viewpoint of financial soundness. We quantify all possible post-investment risks to invest in growth to the extent that we are able to assure a degree of financial soundness when facing the risks.

The second point is to perform strict evaluations and deliberations at the investment consideration stage through our Investment Risk Management Dept. and Investment Review Committee.

The third point is to conduct annual follow-ups on all past investments, judging them against investment monitoring standards, and work to improve their business viability or consider selling off or withdrawing from those investments that are becoming unprofitable or making no progress.

The fourth point is to shift to investments with relatively low risk in order to achieve a greater certainty or investment returns. These include downstream projects, an area in which we have built up a wealth of experience in the market in Japan, and upstream projects that are already in production.

# What is your thinking on new power sources, in particular coal-fired thermal power?

To expand our electric power business, we need to boost our domestic and overseas power sources to 9 million kW and build a competitive power source portfolio by FY2030.

In Japan, we are planning to increase approximately 5.5 million kW of power sources, about 3.5 million kW of which will be through ownership of our own power sources while the rest will be procured from the market and other companies. It is conceivable, however, that the percentage of procurement from the market and other companies could rise. This depends on the government's energy policy and schemes covering the base load power market, which are currently under consideration, and on future fluctuations in supply and demand.

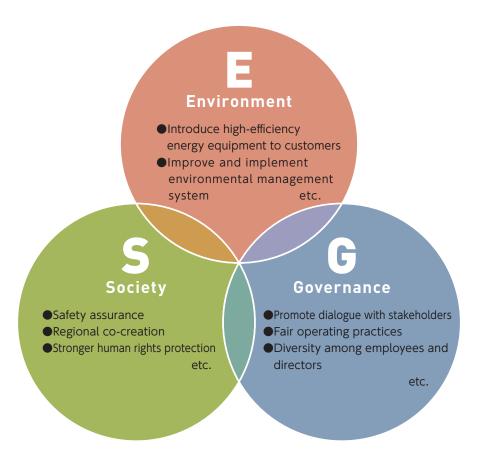
In overseas business, we want to strengthen our downstream businesses that are not subject to crude oil price fluctuations. One particular focus is IPP projects, through which we aim to own around 3.5 million kW in overseas power sources.

With regard to coal-fired thermal power, we are fully aware of trends toward decarbonising, especially in Europe. However for a resourcedeficient country like Japan, coal-fired thermal power offers excellent supply stability. It is positioned as a key base load power source according to the national government's energy mix established in July 2015, and at least some use of coal will remain in the composition of power sources in 2030.

As our electric power business expands, we will require low-cost power that can be supplied stably as a base load power source. As government study of the base load power supply market has begun, we plan to make decisions based on such factors as demand trends and recent updates to the government's energy policy and schemes. It is also a given that when deciding to employ coal-fired thermal facilities, we make concerted efforts to minimize CO<sub>2</sub> emissions through cutting-edge power generation technologies. This includes using supercritical pressure boilers that offer the highest efficiency as a commercial unit for power plants.

Besides coal-fired thermal power, we also plan to continue pursuing renewable energy, including wind, solar and biomass. Additionally, we are working to reduce residential carbon emissions by promoting more widespread use of energy-saving equipment such as our ENE-FARM fuel cell system. Our goal in such efforts, as presented in our long-term management vision, is to help lower CO<sub>2</sub> emissions by approximately 70 million tons cumulatively between FY2017 and FY2030, both in Japan and overseas as part of our environmental management.





# Can you explain the company's ESG efforts?

We have been making progress in management that is in consideration of ESG, and we continue observing international rules and standards as we implement our medium-term and long-term plans.

#### 《 E (Environment) 》

To mitigate global warming, we are promoting more widespread use of natural gas, which has the lowest CO<sub>2</sub> emissions of any fossil fuel, and high-efficiency energy technologies such as fuel cells and cogeneration systems that utilize natural gas. We also have an environmental policy in place and are improving and implementing an environmental management system. We plan to extend efforts throughout the entire Osaka Gas Group value chain to ascertain, reduce and disclose environmental impact, and carry out management that takes into account business opportunities and risks related to climate change.

#### 《S (Society)》

We continue actively working to ensure safety in our operations, contribute to the development of local communities and enhance value for our employees. We also plan to work with our business partners to promote human rights activities.

#### **(G** (Governance))

We have been steadily improving our internal control and risk management mechanisms (appointment of directors, establishment of committees, etc.). We aim to further strengthen governance through dialogue with stakeholders and taking measures to ensure fair operating practices, information security and employee and director diversity.



# How important is the international energy business?

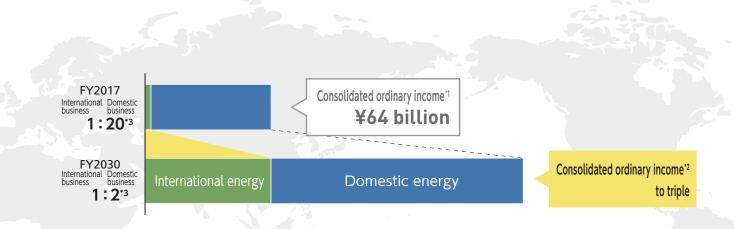
We have positioned the international energy business as a growth area in our efforts to become what we aim to be in FY2030. Focusing on strategic, targeted regions around the world, we are building up a business structure that can bring in well-balanced earnings from operations overseas as well as in Japan, which will lead to sustainable growth.

As an energy provider, we have long been interested in the natural gas value chain and have been pursuing investments around the globe. In North America, Asia and Oceania, our targeted priority areas, we are expanding our operations from upstream to downstream by leveraging our know-how and expertise and fully utilizing our international business infrastructure.

In the upstream arena, not only as an investor, but

also as a buyer of LNG, we cooperate with partners and promote the steady progress of our existing projects such as Gorgon and Ichthys Projects. In new business development, we are focusing on acquisitions with relatively low risk, particularly upstream projects in production.

Downstream, we will bring the Freeport Project to completion and pursue such businesses as IPP, LNG terminals, energy retailing, energy services and LDC (local distribution companies) in regions that have high profitability potential and low risk. We leverage our expertise developed through our domestic operations in Japan to maximize the use of our international business infrastructure. We are also looking into joint ventures in the gas and IPP business with other major players.



- \*1 At oil price of \$55/barrel; exchange rate of ¥115/\$1
- \*2 At oil price of \$70/barrel; exchange rate of ¥115/\$1
- \*3 Consolidated ordinary income base



# What are your thoughts on shareholder returns?

We intend to provide stable dividends. Our basic policy is to maintain a consolidated dividend payout ratio of 30% or higher, excluding short-term fluctuation factors that affect profits. We aim to raise our level of profitability by steadily turning growth investment into projects that contribute to profits, through which we can increase dividends to shareholders.

In addition, we implement other measures of shareholder return such as share buyback when we see it appropriate to do so based on decisions with a comprehensive view on various factors including the progress of investments, our financial situation and management risks, a recent example of which is the increased competition following the full deregulation of the gas retail market in Japan.

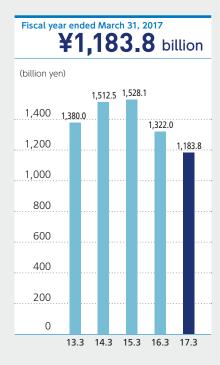
Regarding our capital policy, as we can anticipate heightened business risks due to the significant changes taking place in the environment of our domestic energy business, we need to establish the financial soundness targets of having a shareholders' net worth/total asset ratio of 50% or more and a D/E ratio of approximately 0.7 in order to maintain a high credit rating and strong financial position.

#### Annual Dividends per Share (yen)

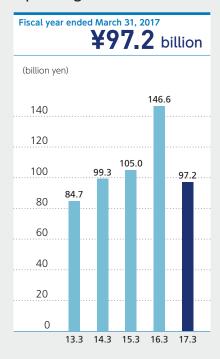


# Financial Data

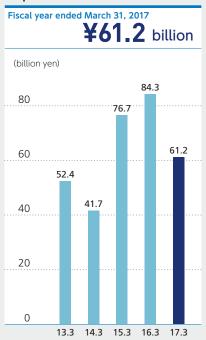
#### Net sales



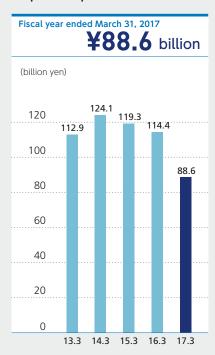
# Operating income



# Profit attributable to owners of parent



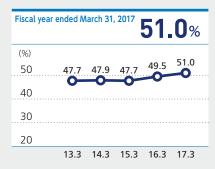
# Capital expenditure



# Return on equity (ROE)/ Return on assets (ROA)



## Net worth/Total assets

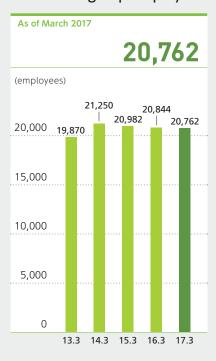


## Debt equity ratio

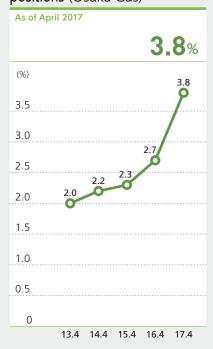


# Non-Financial Data

# Number of group employees



# Percent of women in managerial positions (Osaka Gas)



#### Job turnover rate

(Osaka Gas employees under age 50)

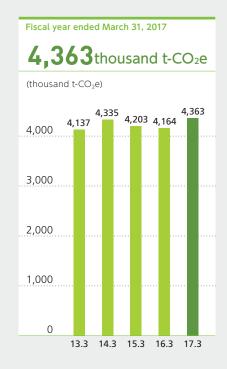


# Customer satisfaction (overall satisfaction\*)

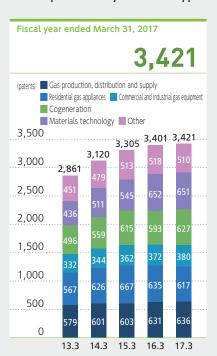
Fiscal year ended March 31, 2017 91.7% (%) 95.0 90.0 85.0 80.0 13.3 14.3 15.3 16.3 17.3

#### \* Overall satisfaction: Percentage of evaluations in the highest two ranks of a six-rank scale regarding customer satisfaction levels in seven areas of operation that have direct interaction with customers

## Group greenhouse gas emissions



# Patent portfolio by business type



# Energy Value Chain of the Osaka Gas Group

The Osaka Gas Group is involved in the full range of processes from extracting and transporting natural gas to producing, supplying, and selling city gas. We are now exploring ways to strengthen the natural gas value chain. We aim to accomplish that by actively expanding new business domains both in Japan and internationally that utilize the expertise that we have gained through our operations to date.

# Business Domains of Certain City Gas Suppliers, including the Osaka Gas Group





Natural gas is a raw material used in the production of city gas. After extraction overseas, natural gas is cooled and liquefied, and then imported into Japan as LNG. Currently, the Group has concluded long-term purchase agreements with natural gas suppliers in eight countries worldwide and is working to ensure stable LNG procurement.

We are proactively moving forward with the operation of our own LNG carriers to enable a more flexible response to changes in demand and other external factors, and to curtail transportation costs.

# Strengthening and Expanding the International Energy Business



# **Extracting and Liquefying Natural Gas Ourselves**

# Gorgon LNG Project and Other Projects

We are participating in several upstream business projects. By expanding our business fields, we are able to procure more cost-competitive LNG.

#### Freeport LNG Project

We liquefy and export natural gas procured in the USA. As well as using it in our own gas and electric power businesses, we aim to sell it to energy providers both in Japan and abroad.



# **Using Our Own Group Carriers** Our Fleet of Eight Ships

By chartering out Group-managed vessels to third parties, we can increase the rate of operation of our LNG carriers and further contribute to profits.



# Participation in the Power **Generation Business**

Participation in Thermal Power Business in the USA

We have decided to newly invest in two projects, the Shore Power Plant and Fairview Power Plant, both fired by natural gas, and have entered into investment contracts.

# **Developing the Energy Services Business**

Business Development in Southeast Asia and Italy

We are developing natural gas supply and sales as well as energy service businesses in the Southeast Asian countries of Thailand and Singapore, and also Italy.



# Power Generation



We own many types of power sources, from the Senboku Natural Gas Power Plant and other natural gas-fired thermal plants and cogeneration to renewable energy sources including solar and wind power systems.

Imported LNG is stored in tanks and subjected

to an evaporation process using the heat from

seawater. Gas is then produced by adjusting

the amount of heat. We gas at two LNG

terminals—in Senboku and Himeji—aiming to

ensure the stable supply of city gas.





We sell electricity to customers ranging from factories and office buildings that require high-voltage networks to small shops that only require low-voltage electricity. We provide an array of services and solutions to help our customers save energy and costs.

--- Business Domains of Conventional Gas Suppliers



# City Gas Production



# Gas Supply

Focusing mainly on the Kyoto, Osaka, and Kobe areas, we are developing a gas pipeline network that covers the Kansai urban region, ensuring the stable delivery of gas to customers through this network. At the same time, the Group actively promotes disaster countermeasures, particularly against earthquakes and tsunamis.



From household demand for hot water and heating, to the industrial and commercial HVAC and combustion system markets, we propose optimal solutions that meet diverse customer needs through combining maintenance with a range of other services.

# Strengthening and Expanding the Domestic Energy Business



# **Expanding into the Electric Power Business**

# Securing a Competitive Source of Electric Power

The Senboku Natural Gas Power Plant has secured a high level of competitiveness through the cost sharing of production equipment.



# **Energy Supply Across a Broad Area**

# LNG Sales to Energy Providers

We sell LNG procured from overseas to other domestic energy providers through the use of LNG carriers and tanker trucks.



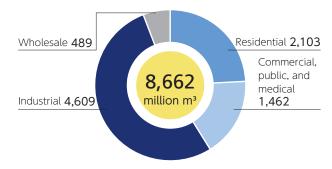
# **Strengthening Ties with** Customers

# Providing Sumikata Services (Home Services)

We offer a variety of home services, including gas appliance repairs, plumbing and air conditioner repairs, and other services useful to our customers, such as disaster-proofing and crime prevention services, as well as renovation work.

# Gas Sales Volume by Use [Non-Consolidated] (million m³)

to other gas providers increased 4.3% to 489 million m<sup>3</sup>.



Forecast for the year ending March 31, 2018

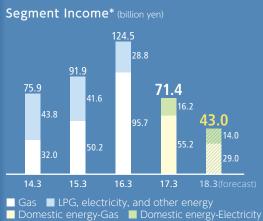
Net Sales ¥1,019.5 billion

Segment Income\* ¥29.0 billion

Note:Starting in the fiscal year ending March 2018, the electric power supply business which had been classified within the "LPG, Electricity, and Other Energy" segment will be made independent and the segment name changed to "Domestic Energy-Electricity" with the LPG sales, LNG sales, and industry gas sales businesses concentrated in the "Gas" segment and the name changed to "Domestic Energy-Gas." The Osaka Gas Finance Co., Ltd. segment will be changed from "Life & Business Solutions" to "Domestic Energy-Gas."

Starting in the fiscal year ended March 2015, Osaka Gas repositioned the renewable energy business to either the "LPG, Electricity, and Other Energy" segment or to the "International Energy" segment according to the details of individual business activities. For this reason, figures from the fiscal year ended March 2015 on include the domestic renewable energy business.

# 1,377.4 <u>1,</u>380.7 206.4 ,119.5 1,136.9 911.2 14.3 15.3 16.3



<sup>\*</sup> Segment income = Operating income + Equity in earnings of affiliates

[ Efforts to Become What We Aim To Be in FY2030 ]

# We aim to maximize customer accounts through the comprehensive supply of energy and services.

Amidst the full deregulation of the electricity and gas retail markets, we will expand our connections with new customers for electricity and LPG while minimizing the outflow of gas customers. In addition to supplying energy, we will strive to strengthen our relationships with customers by offering comprehensive energy and

services, aiming to differentiate ourselves by expanding new services and offering high-quality operations. We will maximize customer accounts in electricity, LPG, Sumikata Services (home services), Utility Agent contracts, and more by utilizing the connections with customers that we have cultivated to date.

## **Solutions for Residential Customers**

We will further enhance our strengths, offering a range of gas and electricity rates, providing one-stop support for living, high-quality safety and reliability, and energy-saving and environmentally friendly products. We will continue striving to be our customers' preferred choice as a new era energy marketer.

# Gas and Electricity Rate Options

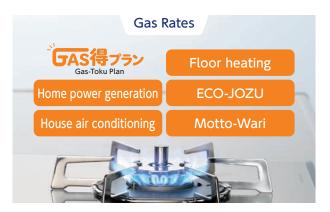
In April 2017, in addition to standard gas rates, we started offering the "Gas-Toku Plan Motto-Wari" rate aimed mainly at residential customers. The plan offers better rates to more customers regardless of which gas appliances they use.

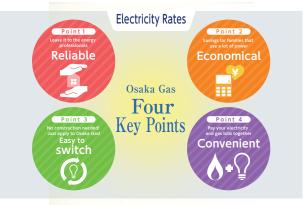
Customers who contract for both electricity and city gas with Osaka Gas will receive a package discount.

As of June 3, 2017, Osaka Gas is supplying electricity to 350,000 customers. We aim to expand to supply 700,000 customers by 2020 and will continue to expand our pricing plans and services to meet customers' needs.

# **High-Quality Safety and Reliability**

We have approximately 200 service chain partners in our service area that work closely with customers in their areas providing Sumikata Services (home services) in addition to contract services for Osaka Gas (such as opening and shutting off gas service and maintenance of gas equipment). They take calls 365 days a year, and have a 24-hour reception system in place particularly for gas appliance repairs. If a call is received by 3:00 p.m., one of 1,300 technicians qualified by Osaka Gas to repair gas appliances will visit the customer on that day. Customers have given a 98% customer satisfaction rating to the speed with which repairs are completed after their call is made.







# **One-Stop Support for Living**

In May 2016 we began offering Sumikata Services (home services) which provide plumbing repair, air conditioner repair, housecleaning, and other services as a one-stop service. In about one year since the start of this system, we have received over 15,000 inquiries and the customer satisfaction rating is very high at over 90%.

Additionally, in April 2017 we added the new Sumikata Plus service, which provides emergency home repairs and other living support services for a fixed monthly fee.

In these ways we are answering customers' varied needs and strengthening our relationships with those customers.



# **Initiatives Aimed at Promoting** Installation of Residential Fuel Cell Cogeneration System "ENE-FARM"

ENE-FARM is a fuel cell cogeneration system for residential use that generates energy by initiating a reaction between hydrogen extracted from city gas and oxygen in the air. In addition to further expanding the use of natural gas, it can help save energy, reduce CO<sub>2</sub> emissions, improve energy security, and cut peak electricity.

In April 2016, we began marketing a new ENE-FARM product that for the first time in Japan allows for surplus electricity generated by customers to be purchased.

In the future, we will strive to see ENE-FARM come into more widespread use and will work to further develop the relevant technologies and reduce costs. We are helping our customers live more comfortable lifestyles, while reducing the burden on the environment, and improving energy security.

- \*1 World's highest power generation efficiency using a household fuel cell with a rated power output of 1 kW or less (Source: Osaka Gas, as of February 24, 2016)
- \*2 Calculated using the lower heating value; the power generation efficiency for the LP gas model is 51%
- \*3 World's smallest solid oxide fuel cell (including waste heat management system) for residential use (Source: Osaka Gas, as of February 24, 2016)
- \*4 First in Japan in the business of purchasing electricity generated by residential fuel cells through the electric power system (Source: Osaka Gas, as of February 24, 2016). Applicable targets from whom surplus electricity is purchased are customers who are using the new product (192-AS05 and 192-AS06 models) and have gas usage contracts with Osaka Gas.





# **ENE-FARM** type S

- OAchieves the highest power generation efficiency in the world at 52%\*1\*2
- ○World's smallest\*3 fuel cell for residential use offers setup flexibility Can be installed in an apartment building or retrofitted to an existing residence
- OPurchases of surplus electricity\*4 OService for remote monitoring
- of power generation



## Solutions for Commercial and Industrial Customers

In addition to supplying gas and electricity, we carry out a series of initiatives to use energy in optimal systems, from energy-saving diagnoses and facility improvement proposals for customers to procurement of required equipment, development of technologies and products, maintenance, and management. We strive to propose optimal solutions to solve customers' energy problems on a one-stop basis, strengthening relationships with and inspiring continuing loyalty from our customers.

# **Utility Agent® contract**

OGCTS Co., Ltd. of the Osaka Gas Group provides utility facilities (gas, electricity, and water supply) to customers for one-stop service from maintenance and management services to energy procurement.

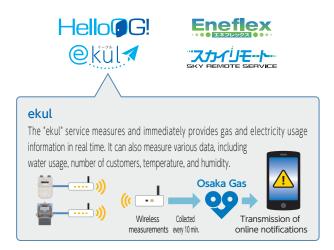
SYSTEM



#### **ICT Services**

We operate the HelloOG! members-only website, which provides gas and electricity usage, billing, and other helpful information free of charge. Started in April 2016, in just one year the site received 23,000 customer signups. Each month, when the billing amount is determined, an email is sent to each customer informing them of the monthly bill. We are also developing other new functions and services.

Another service we offer is the "ekul" service, which measures and provides gas and electricity usage information in real time, alerting customers to overuse or wasteful use.



# **Delivering Solutions for the Industrial Market**

We began developing burners for industrial furnaces in the 1950s and 1960s, and have developed a vast range of burners at our experimental facility. With our unique engineering

expertise, we also supply optimal solutions that boost customer satisfaction and help develop further demand.



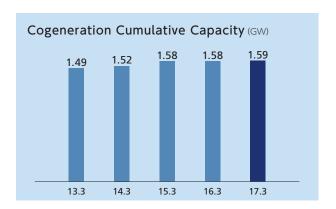
- Technology and Equipment Development Using Unique Engineering Strengths
- Engineering Solutions, Fuel Conversion
- Maintenance
- Energy Diagnoses and Facility Improvement Proposals

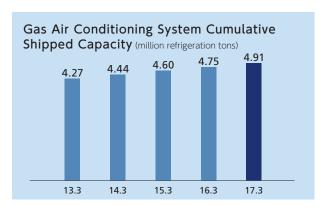
**Boost Customer** Satisfaction

> Develop Demand

# **Expanded Use of Gas Cogeneration Systems** and Air Conditioning Systems

We are continuing to propose cogeneration systems and gas air conditioning systems that help reduce peak electricity consumption and promote energy conservation.





## **Electric Power Business**

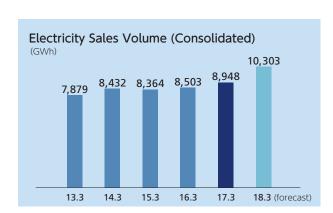
#### [ Efforts to Become What We Aim To Be in FY2030 ]

The electric power business of the Osaka Gas Group will expand wholesale supply to ENNET Corporation and retail sales to user households growing to a scale of 9,000 MW in FY2030, including power sources in Japan and overseas. Moreover, we will secure the required supply capability by utilizing market transactions and procurement from other companies in addition to developing new power sources, and we will build a flexible and optimal power source portfolio as we strive for business management efficiency.

# **Efforts to Expand the Electric Power Business**

Osaka Gas commenced retail sales of electric power in April 2016 in response to the full deregulation of the electricity retail market, and as of June 3, 2017 has accounts with approximately 350,000 customers, supplying electricity to households, restaurants, dry cleaners, and other low-voltage fields. We will strive to expand retail sales with the aim of supplying power to 700,000 customers by FY2020. In special high-voltage and high-voltage power, as before, we sell power as a sales agent of ENNET Corporation.\*1

The Osaka Gas Group also has alliances with other business operators in retail sales, in addition to selling and procuring power at the Japan Electric Power Exchange.

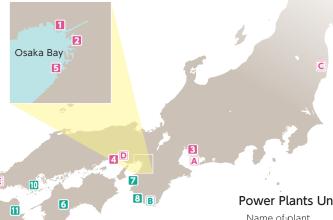


\*1 ENNET Corporation is a joint venture established by three companies: NTT Facilities, Tokyo Gas, and Osaka Gas. It entered the retail electricity business in 2000.

# **Power Source Ownership and Development Status**

Currently, we own about 1,880 MW of power in Japan—about 3,280 MW when including international power sources.

In the first half of FY2017, the Nagoya II Power Plant (coal/wood biomass, 110 MW) is scheduled to start operations adjacent to the currently operating Nagoya Power Plant.



Power sources currently owned by the Osaka Gas Group

Thermal Renewable

# Capacities of Owned Power Sources (as of year ended March 2017)

Domestic power plants and their power generation capacity (owned by the Osaka Gas Group) ■ Torishima Energy Center (natural gas), Gas & Power 150 MW 2 Funamachi Power Plant (natural gas), Nakayama Joint Power Generation 3 Nagoya Power Plant (coal/wood biomass), Nakayama Nagoya Joint Power Generation 149 MW 4 Himeji Power Plant (natural gas) 58 MW 5 Senboku Natural Gas Power Plant (natural gas), Senboku Natural Gas Power Generation 1,109 MW 6 Hayama Wind Farm Power Plant (wind), Hayama Wind Farm Power Plant 20 MW 🗾 Hirogawa Myojin-yama Wind Power Plant (wind), Hirogawa Myojin-yama Wind Power Plant 16 MW 8 Yura Wind Power Plant (wind), Yura Wind Power Generation 10 MW Hizen Wind Power Plant, Hizen South Wind Power Plant (wind), Hizen Wind Power Generation 30 MW 10 Hirao Wind Power Plant (wind), Hirao Wind Power Generation 9 MW 13 MW II Nissan Green Energy Farm in Oita (solar), Nikki Mirai Solar Plant 165 MW Others Total 1,878 MW

In addition to the above, the Osaka Gas Group owns stakes totaling 1,400 MW in power sources outside of Japan. Data in parentheses indicate the fuel used for power generation.

#### Power Plants Under Construction or Under Consideration

Name of plant	Start of operation	Fuel for power generation	Power generation capacity	Amount owned by Osaka Gas
A Nagoya II Power Plant	First half of FY2017	Coal/wood biomass	110 MW	110 MW
<b>B</b> Inami Wind Power Plant	June 2018	Wind	26 MW	26 MW
C Fukushima Natural Gas Power Plant	Spring of 2020	Natural gas	1,180 MW	236 MW
▶ Himeji Natural Gas Power Plant	Early 2020s	Natural gas	1,000-1,800 MW	660-1,200 MW
■ Nishiokinoyama Power Plant	Early 2020s	Coal	1,200 MW	540 MW

# Initiatives Aimed at Expanding the Use of Renewable Energy

We are promoting both solar power and wind power generation domestically and overseas to expand the use of renewable energy that is friendly to the global environment and to bring about a low carbon society.

The Yura Solar Power Plant started operation in FY2016, and the generation capacity of the solar power plant has reached 58MW. Adding to our existing wind power generation capacity of 85MW, the Inami Wind Power Plant will begin operations in June 2018.

Also, we will try to control CO2 emissions by co-firing





Torishima Solar Power Plant (Osaka Prefecture)

Hirogawa Myojin-yama Wind Power Plant

5% wood biomass fuels at Nagoya Power Plant and 30% at Nagoya II Power Plant.

In FY2030, we aim to own a renewable energy power source of about 500 MW.

# **Energy Resource Procurement**

### [ Efforts to Become What We Aim To Be in FY2030 ]

The city gas supplied by the Osaka Gas Group is mainly manufactured from LNG imported from overseas. It is extremely important to procure LNG stably and inexpensively. We will strive to diversify our suppliers and procure new natural gas

resources such as shale gas, and will also work to reduce raw material procurement costs by diversifying the terms and conditions of agreements such as LNG procurement pricing mechanisms.



Mars, the 8th Osaka Gas carrier

# **Diversifying Sources of Supply**

Currently, the Osaka Gas Group procures supplies of LNG under long-term agreements concluded with producers from the eight countries of Brunei, Indonesia, Malaysia, Australia, Qatar, Oman, Russia, and Papua New Guinea.

In FY2018, we will be pursuing opportunities to source supplies from the USA.

## Use of Osaka Gas Group LNG Carrier Fleet

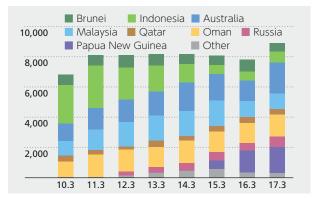
In order to further stabilize the procurement of energy resources while reducing the costs of transportation, as well as expand trading in LNG, the Osaka Gas Group is building a fleet of LNG carriers.

The seventh and eighth vessels were launched in FY2014 and FY2016, respectively. By using new steam turbine engines in these newly built LNG carriers, we were able to reduce fuel consumption while also benefiting the environment through controls on CO2 and NOx emissions.

# **Diversifying the Terms and Conditions of Agreements**

There is an established system in Japan wherein LNG procurement prices are generally linked to the price of crude oil. For this reason, when crude oil prices rise, the price of LNG in Japan also rises, creating a situation which easily leads to a price discrepancy between Japan and the West.

#### LNG Purchase Volume (thousand tons)



The Osaka Gas Group is striving to establish new pricing mechanisms in LNG procurement. As one example, the Group will introduce pricing mechanisms indexed to Henry Hub\* prices instead of crude oil prices for procurement from the USA. By diversifying pricing mechanisms in agreements, we are working to stabilize and reduce the price of LNG.

<sup>\*</sup> The name given to an index widely used as a reference for natural gas prices in the USA.

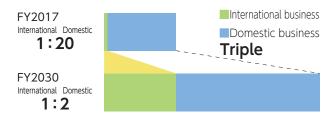
# International Energy **Business**

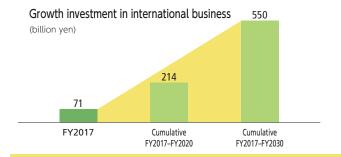
# [ What We Aim to Be in FY2030 and Summary of Current Situation ]

As an energy business operator, the Osaka Gas Group has focused on the natural gas value chain from early on and has made investments abroad accordingly. In the future we will continue to invest outside of Japan and by FY2030 will increase our international-to-domestic business ratio to 1:2. This will create a business structure that, in addition to the domestic market, will earn revenue in priority areas where we are focusing our activities, namely North America, Asia, and Oceania.

In the fiscal year ended March 2017, net sales were 22.6 billion yen and segment income was 8 billion yen. In the fiscal year ending March 31, 2018, we anticipate net sales of 25 billion yen and segment income of 4 billion yen.

# Anticipated FY2030 consolidated ordinary income

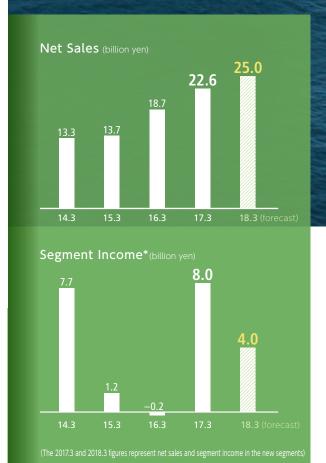




Forecast for year ending March 2018

Net Sales  $\frac{425.0}{100}$  billion

Segment Income\* ¥4.0 billion



\* Segment income = Operating income + Equity in earnings of affiliates Note: From the fiscal year ending March 2018, Sumisho Osaka Gas Water UK Limited, an equity-method affiliate, will be repositioned from Life & Business Solutions into Internatiional Energy Business.

Starting in the fiscal year ended March 31, 2015, Osaka Gas repositioned the renewable energy business from the environment/non-energy segment to the LPG/electricity/other energy segment or to the international energy segment according to the details of individual business activities. For this reason, figures from the fiscal year ended March 31, 2015 on include the international renewable energy business.

## [ Efforts to Become What We Aim To Be in FY2030 ]

# We will strengthen the profit structure of our international energy business by strengthening each business field.

In order to become what we aim to be in FY2030, we will promote expansion from upstream to downstream businesses, centering on our priority areas, namely North America, Asia, and Oceania. To do so, we will make full use of the expertise we have cultivated in Japan and the international business infrastructure we have built.

Also, we will expand our businesses based on the following three policy points.

- Concentrating management resources on priority areas and priority business in each area
- 2 Accelerating business development by collaborating with mutually complementary partner companies and utilizing M&A
- 3 Increasing business engagement and improving business implementation capabilities (human resource development, development of a quick decision-making system, etc.)

#### Know how of domestic businesses



Natural gas

power plant



terminal





Fleet

operation

#### Existing international business bases



Project





(THAILAND) CO.,LTD.

City-OG Gas in USA **Energy Services** 

OSAKA GAS **THAILAND** 

# **Upstream and Trading Business**

Gas / oil field development

LNG trading

conversion

IPP\*2

terminal business

**Downstream Business** 

in USA (under construction)

LDC\*3 business

Retailing and energy services

- \*1 Source: Freeport LNG Development, provided by L.P. (projected image completion) \*2 Independent Power Producer
- \*3 Local Distribution Company

#### Specific Initiatives

# Europe

 Utilize existing assets and expand businesses to energy service field, etc.

## Japan

 Expand LNG procurement and sales, with a focus on Asia and the Pacific

#### Southeast Asia

- Participate in new LNG terminal and IPP projects
- Promote expansion of retail business (fuel conversion, energy services, etc.)

#### **Australia**

- Complete the Ichthys Project
- Acquire new upstream interests, with a focus on projects in production or in development/ expansion phase

#### North America

- Complete the Freeport LNG Terminal (scheduled to start operation in FY2018)
- Acquire new IPP projects and participate in the business with the deep involvement of ownership
- Participate in gas businesses through which our know-how can be effectively utilized
- Acquire new upstream interests, with a focus on projects already in production or in the development/expansion phase

We will continue to push ahead with the launch or completion of projects in which we are already participating. We will also work to expand our scale of business, especially in areas where economic growth can be expected, focusing on businesses that can leverage the strengths of existing assets and proprietary know-how.

Specifically, in the upstream business area, we will move

forward steadily with the Gorgon and Ichthys Projects and also work on acquiring new interests, with a focus on projects already in production or in the development/expansion phase.

In the downstream business area, we will work hard to complete the Freeport Project and speed up considerations for participating in other projects such as IPP projects and LNG terminals.

# **Upstream and Trading Business**

#### [ Business Overview and Characteristics ]

The upstream business (energy resource development) of Osaka Gas is helping us to accumulate valuable expertise and knowledge in the field of and also contribute to the expansion and stabilization of profits.

We will robustly promote those ventures in which we have

already decided to engage. In addition, we will continue to carefully examine the acquisition of new interests that will improve our business capabilities, with a focus on projects already in production.

In trading, we will utilize a diversified procurement portfolio and expand sales while responding to customer's needs.

#### Status of Investments

Production started on the Gorgon LNG Project in 2016. Meanwhile, preparations are progressing toward the start of production at the Ichthys LNG Project as well.







Ichthys LNG Project

#### **Downstream Business**

#### [ Business Overview and Characteristics ]

In downstream businesses, we aim to secure stable income by utilizing the know-how and experience cultivated in the domestic energy business to improve the business value of each project.

The Group participates in LNG terminal and IPP businesses and other business in North America, Europe, the Middle East, and Australia. We are also engaged in natural gas sales and energy services in Southeast Asia, and would like to expand into projects such as power plants and LNG terminals. We will continue to amass business know-how in the region and make use of it to proactively develop our businesses.

#### Status of Investments

# **Steady Progress on Freeport Project**

Construction work is proceeding steadily on the Freeport LNG Project in Texas, USA. The gas liquefaction facility is set to start shipments in FY 2018.

LNG procurement from the USA is aimed at diversifying our supply sources and our LNG price indexation. It also introduces LNG without restrictions on the country of destination, which will help us to achieve stable and competitive LNG procurement.

# Natural Gas-Fired Thermal Power Plants in the PJM Market, USA

We have acquired three natural gas-fired thermal power plants in the PJM (Pennsylvania-New Jersey-Maryland Interconnection) market, North America's largest wholesale electricity market.

As aging coal-fired power stations in the United States get decommissioned, power sources will decrease in number, and expected to take their place will be thermal power plants fired by







Shore Power Plant

Fairview Power Plant St. Charles Power Plant

natural gas, an environmentally friendly new power source.

Our aim is to focus on and expand our power generation business by building know-how about the business in the USA, which includes fuel procurement for projects and sales of electricity to the power market.

# **Business Development in Southeast Asia**

In March 2013 we set up a local representative company in Singapore and began selling natural gas. Today we also provide energy services to Thailand. We are also setting up business operations in Indonesia and the Philippines as part of an effort to ascertain local needs in a timely manner as they arise in different parts of Southeast Asia.

# Investments in the International Energy Business (investments to date)



#### Participation in Upstream Projects (LNG, gas fields, etc.)

- 1 Norwegian North Sea (Idemitsu Snorre Oil Development Co., Ltd.) Stake since 2005: 2-10%
- G Qalhat LNG
  - Stake since 2006: 3% LNG output: 3.3 million tons/year
- Universe Gas & Oil Company, Inc. (Sanga Gas Field) Stake since 1990: 1.5%
- Crux Gas and Condensate Field Stake since 2007: 3%
- Sunrise LNG Project
  - Stake since 2000: 10% Projected LNG output: about 4 million tons/year (planned)
- (B) Evans Shoal Gas Field Stake since 2000: 10%
- Ichthys LNG Project
- Stake since 2012: 1.2% Projected LNG output: 8.4 million tons/year (planned)
- Gorgon LNG Project
- Stake since 2009: 1.25% Projected LNG output: 15 million tons/year (planned)
- Western Papua New Guinea Gas and Condensate Field Stake since 2014: 10-20% (ratio depends on field)
- 1 Pearsall Shale Gas and Liquids Development Project Stake since 2012: 35%

#### Participation in Downstream Projects (LNG receiving terminals, IPPs, etc.)

- Sagunto LNG Terminal
  - Ownership interest since 2010: 20% Vaporization capacity: 6.4 million tons/year
- Erogasmet
  - Ownership interest since 2015: City gas distribution business
- 4 Shuweihat S2 IWPF
  - Ownership interest since 2011: 10% (25% equity interest in the operation and maintenance
  - Power generation capacity: 151 MW Freshwater processing capacity: 10 million gallons/day
- Osaka Gas (Thailand)
  - Ownership interest since 2013: Energy services business
- OGP Energy Solutions
  - Ownership interest since 2015: Energy services business
- O NS-OG Energy Solutions
  - Ownership interest since 2014: 30% Cogeneration business
- OCITY-OG Gas Energy Services
  - Ownership interest since 2013: 49% Gas retail business
- (i) EII (Energy Infrastructure Investments)
  - Ownership interest since 2008: 30.2% Four pipelines, two gas-refining facilities, two power plants, two interconnected power transmission lines Power generation capacity: 18 MW

- The Hallett 4 Wind Farm Project
  - Ownership interest since 2009: 39.9% Power generation capacity: 53 MW
- Marianas Energy IPP
- Ownership interest since 2005: 100% Power generation capacity: 87 MW
- Osaka Gas Power America
  - Ownership interest since 2005: 8 IPP projects Power generation capacity\*: 380 MW \* Excludes 50% interest in 87 MW generation capacity of Marianas Energy IPP
- Tenaska Gateway IPP
  - Ownership interest since 2004: 40% Power generation capacity: 338 MW
- Freeport LNG Terminal (vaporization business) Ownership interest since 2008: 10.81% Vaporization capacity: 13 million tons/year
- Freeport LNG Project
  - Ownership interest since 2012: 25% (first train) LNG output: 4.64 million tons/year (planned)
- 4 Aurora Solar Power Generation Project Ownership interest since 2012: 50% Power generation capacity: 51 MW
- 6 St. Charles Energy Center Natural Gas-Fired Power Plant Ownership interest since 2015: 25% Power generation capacity: 181 MW
- Shore Natural Gas-Fired Thermal Power Plant Ownership interest since 2017: 20% Power generation capacity: 145 MW
- Fairview Natural Gas-Fired Thermal Power Plant Plant Ownership interest since 2017: 50% Power generation capacity: 525 MW

#### [ What We Aim to Be in FY2030 and Summary of Current Situation ]

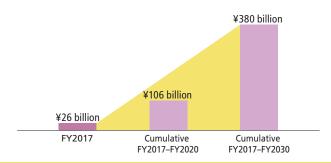
The Osaka Gas Group actively applies the technologies and know-how it has accumulated in the energy business, developing businesses that differ from the energy field in order to diversify business risk.

These non-energy businesses are playing a major role in supporting the Osaka Gas Group's earnings base as a stable source of earnings, particularly as crude oil prices and foreign exchange trends remain unclear.

We plan to accelerate growth in three core business areas in Life & Business Solutions—Real Estate, Materials and Information—aiming to consistently increase profits through fiscal 2030.

In the fiscal year ended March 31, 2017, net sales totaled 208.3 billion yen. Segment income was 18.6 billion yen. For the fiscal year ending March 31, 2018, we anticipate net sales of 208.5 billion yen and segment profit of 19 billion yen.

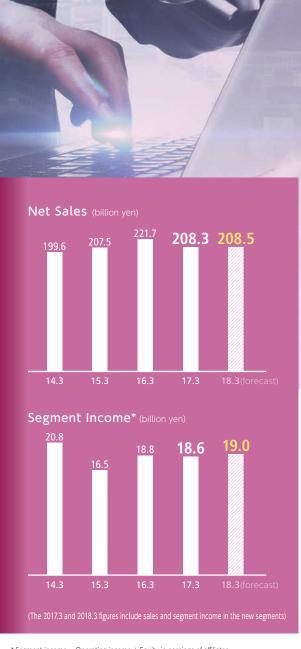
### **Expanding Growth Investment in LBS**



Forecast for year ending March 2018

Net Sales ¥208.5 billion

Segment Income\* ¥19 billion



\* Segment income = Operating income + Equity in earnings of affiliates

Note: From the fiscal year ending in March 2018, Sumisho Osaka Gas Water UK Limited, an equity-method affiliate, will be repositioned from Life & Business Solutions into International Energy Business.

Starting in the fiscal year ended March 31, 2015, Osaka Gas repositioned the renewable energy business from the environment/non-energy segment to the LPG/electricity/other energy segment or to the international energy segment according to the details of individual business activities. For this reason, figures from the fiscal year ended March 31, 2015 on do not include the renewable energy business.

#### Real Estate Business — Osaka Gas Urban Development Group

#### [ Business Overview and Characteristics ]

Our real estate business extends widely to include the development of properties such as sale and rental apartments, office buildings, management of buildings and facilities, and so on.

#### [ What We Aim to Be in FY2030 ]

The Osaka Gas Group aims to be a strong player in diverse areas such as leasing, sales, and maintenance by expanding business in the Kansai area as well as in the Tokyo area.



Urbanex Honmachi

#### Key Strategies Through FY2020

• We aim to strengthen the earnings base of existing businesses and establish new earnings by expanding both our range of business offerings and their geographical expansion to the Tokyo area.

# Steady Strengthening of **Earnings Base**

- Ongoing investment in rental housing
- Stable profits from condominium sales
- Planned repair investments for aging properties
  - Earnings from Expanded **Business Offerings**
  - Quick selling of developed properties and other new business challenges
- Profit earning through building maintenance (construction management, energy conservation, construction) plus back office solutions and more (OGFA)
- Development of new buildings within districts (KRP)

# **Expanded Business** in Tokyo Area

- Accelerated investment in rental housing
   Start condominium business
- Activities aimed at asset acquisition of non-residential properties such as offices

#### Current Situation

### The Osaka Gas Urban Development Group

#### [ Osaka Gas Urban Development ]

Osaka Gas Urban Development is developing condominiums for sale under "The Urbanex" brand, along with rental condominiums and rental offices under the "Urbanex" brand.

#### [ Osaka Gas Facilities (OGFA) ]

Osaka Gas Facilities provides comprehensive management services such as facility operation management, security, and cleaning at facilities such as office buildings, hospitals, research facilities, and factories.

In addition, we meet the wide-ranging needs of customers in relation to buildings and facilities, extending from repair work and large -scale renovations to energy conservation, CO<sub>2</sub> reductions, and the visualization of energy consumption.

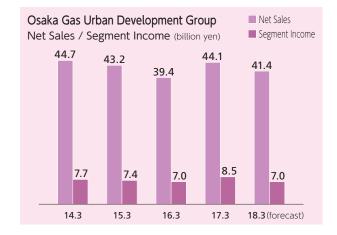
#### [ Kyoto Research Park (KRP) ]

Kyoto Research Park is an industrial cluster home to nearly 400 tenant venture companies and organizations. In addition to providing offices and laboratories, KRP promotes the creation of new businesses in collaboration with Kyoto Prefecture, Kyoto City, and universities.

KRP aims to be a hub for innovation that generates new ideas and business by bringing together individuals and companies working in diverse fields.

#### About the Fiscal Year Ended March 31, 2017

In the fiscal year ended March 31, 2017, profit rose due to a steady increase of profitable real estate in the leasing business, sales growth due to strong sales in the built-for-sale housing business, a consistently high occupancy rate in the research park, and the opening of a service office (KRP BIZ NEXT).



#### Materials Business — Osaka Gas Chemicals Group

#### [ Business Overview and Characteristics ]

Osaka Gas employs coal chemistry technologies as well as pharmaceutical- and agrochemical-related technologies for the development, manufacture, and sales of highly functional materials.

In 2014 we acquired Jacobi Carbons AB (Sweden) and are developing our business globally.

#### [ What We Aim to Be in FY2030 ]

Engaged primarily outside of Japan, we aim to become a manufacturer of functional materials with a top position in niche markets that contributes positively to industry, life, and the environment.

#### Key Strategies Through FY2020

- We will establish a stable earnings base through diverse product lines in five business areas.
- We will also be working on substitutions in our business portfolio to adapt to changes in the times and to achieve sustainable growth.

#### **Fine Materials**

Development of various applications for fluorene with its excellent optical properties and heat resistance

Resins for camera lenses in smartphones and other devices, semiconductor materials, liquid crystal displays



# Carbon Materials

Expanded sales of DONACARBO carbon fiber with its excellent heat insulation and abrasion resistance

Molded insulation for siliconmanufacturing furnace for photovoltaic cells



# **Activated Carbon**

Expanded global value chain through cooperation between the Jacobi Group and Osaka Gas Chemicals Activated carbon for purification processes in food. alcohol and pharmaceutical manufacturing, air purifiers and water filters



#### Silica- and Alumina-based Materials

Expanded sales of adsorbents and additives and efforts toward developing new applications

Activated clay for petroleum and for refining cooking oil





#### **Preservatives**

Development of wood preservatives, industrial preservatives, industrial coating agents

Xyladecor® wood preservative, Xylamon termiticide



#### Current Situation

#### About the Osaka Gas Chemicals Group

#### [ Osaka Gas Chemicals ]

Established in 1931, Osaka Gas Chemicals employs technologies cultivated in coal chemistry and pharmaceuticals to develop functional chemical products that add value to customers' products.

### [ Mizusawa Industrial Chemicals Group ]

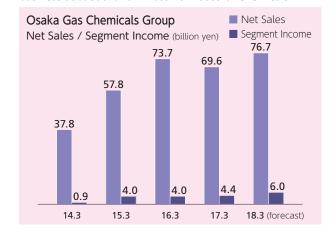
Mizusawa Industrial Chemicals was established in 1937 to domestically refine the activated clay needed for refining petroleum and fats and oils. It joined the Osaka Gas Group in 2015.

#### [ Jacobi Carbons Group ]

An activated carbon producer established in Sweden in 1916, Jacobi does business in 18 countries. It joined the Osaka Gas Group in 2014. Osaka Gas Chemicals and the Jacobi Group together form the second largest activated carbon producer in the world. (Based on Osaka Gas Chemicals' FY2016 performance)

#### About the Fiscal Year Ended March 31, 2017

In the fiscal year ended March 31, 2017, profit increased due to expanded preservatives and activated carbon business sales for Osaka Gas Chemicals, and robust business at Jacobi and Mizusawa Industrial Chemicals.



#### Information Solutions Business — OGIS-RI Group

#### [ Business Overview and Characteristics ]

OGIS-RI traces its roots back to developing and managing systems for the gas business of Osaka Gas. After various acquisitions, it organized a group of system providers to offer services to the manufacturing and financial industries.

By sharing the expertise of each company in the group, we provide comprehensive IT services ranging from consulting, design, development, and the operation of corporate information systems to data centers, cloud services, and security.

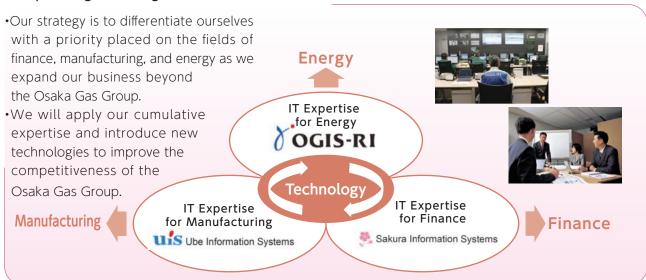
#### [ What We Aim to Be in FY2030 ]

Through high-level innovation in information and communications technologies, we aim to be a corporate group that provides new value and grows sustainably with customers.



OGIS-RI Head Office

#### Key Strategies Through FY2020



#### Current Situation

#### About the OGIS-RI Group

#### [OGIS-RI]

Established in 1983, it is the systems provider company of the Osaka Gas Group with extensive IT expertise in the energy industry.

#### [ Sakura Information Systems ]

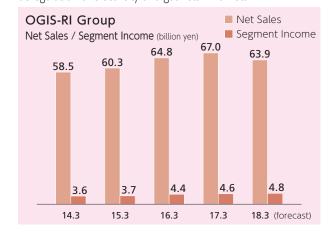
Established in 1972, it is engaged in the construction and operation of key systems for the Sumitomo Mitsui Banking Corporation Group and has extensive expertise in the financial industry.

#### [ Ube Information Systems ]

Established in 1983, it provides systems construction and operation as a comprehensive information processing service company of the Ube Industries Group, and has IT technology in the manufacturing industry.

#### About the Fiscal Year Ended March 31, 2017

In the fiscal year ended March 31, 2017, earnings increased due to growth in providing new solutions and robust business in systems development for energy companies after the full deregulation of electricity and gas retail markets.



# **Technological Development**

[Technological Development Strategy]

# Technology-Driven Solutions and Innovation

The Osaka Gas Group aims to spur innovation for the next generation and provide optimal solutions to its customers by leveraging its accumulated core technologies.

# Development of technologies for business solutions

- Accumulated data used to predict equipment failure and improve services
- Development of new carbon and chemical materials and the creation of new applications for those materials

# Development of technologies in the environmental field

- Lowered price and improved efficiency of hydrogen generator HYSERVE
- Wastewater treatment systems developed
- Equipment developed to generate biogas from kitchen waste

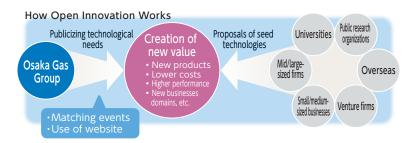
# Development of technologies to expand the use of natural gas

- Increased efficiency and decreased size of residential fuel cell ENE-FARM
- Built-to-order engineering using combustion technologies
- "Smart" gas appliances created using information and communications technology (ICT)

# Promotion of projects using engineering technologies

- Resource development and gas liquefaction engineering
- LNG facility engineering
- Power generation engineering

The Osaka Gas Group aims collaborate with new partners to speed up technology development, improve the performance of products it develops, and increase the investment efficiency of developing technology, so we are promoting the concept of "open innovation," which will boost added value by merging our own technologies with technologies from outside the Group.

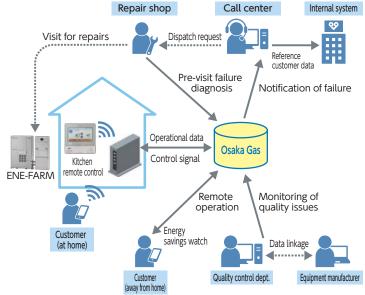


#### Development of Technologies for Business Solutions (Major Initiatives)

The creation of new services utilizing IoT functionality built into the ENE-FARM residential fuel cell system

As of April 2016, residential fuel cell systems, such as the next-generation ENE-FARM type S feature an always-on connection to the Internet and uses the cloud for remote monitoring.

This capability allows detection of any abnormality in the system's power generation. In that event, Osaka Gas will then call to notify the customer of the situation and provide an emergency repair service visit when necessary. This power generation monitoring service gives customers peace of mind. The on-site repair time can also be shortened by analyzing the data sent to the cloud in the event of a failure, thereby streamlining maintenance work. Customers also get improved convenience through such remote control features as filling the bath with hot water or controlling the floor heating using their smartphones.

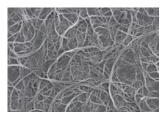


# Development of fluorene cellulose as a fiber for strengthening resin

Osaka Gas developed fluorene cellulose, a cellulose fiber with uniform dispersion, by reacting the cellulose fiber surface with a fluorene derivative. Fluorene cellulose does not mix easily with water but mixes easily with resin.

Fluorene cellulose is a resin fiber material with low environmental impact and has strong potential for use in home appliances and as a structural material in automobiles.

Fluorene derivatives with excellent optical properties and heat resistance have been used for liquid crystal displays, smartphone camera lenses, and more. We now aim to develop new applications through the commercialization of fluorene cellulose.



Electron microscope image of fluorene cellulose

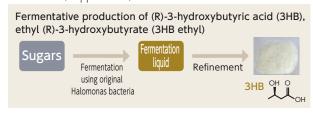
### Osaka Gas can now produce ketone bodies, known for their use in diets

Osaka Gas has developed a method for manufacturing ketone bodies ((R)-3-hydroxybutyric acid) using bioprocess (fermentation) technology cultivated over many years in collaboration with the National Institute of Advanced Industrial Science and Technology.

(R)-3-hydroxybutyric acid, a ketone body, is produced from fatty acids in the liver to supply energy to the brain in place of glucose.

Recently, there has been growing interest in ketone bodies for their effectiveness in dieting and improving athletic performance. Osaka Gas was the first in the world to discover the skin anti-aging effects of ketone bodies.

We anticipate new applications for their use in the future in health foods, supplements, and cosmetics.



# Intellectual Property Strategy

The Osaka Gas Group positions intellectual property rights as an important management resource. At the same time, the Group takes proactive steps to secure and utilize intellectual property rights in concert with its business and technology development strategies.

#### Strategically Acquiring Intellectual Property Rights

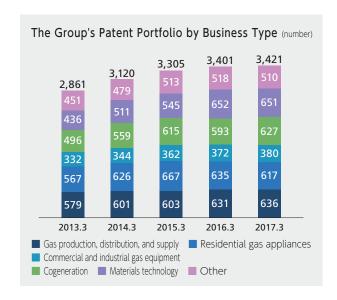
We acquire patents on a steady basis by focusing on invention and discovery that is closely related to specific development sites, incorporating judgments on patentability from external authorities after filing. Through patent analysis and mapping we are able to build a thorough and complete network of patents, which is an important motif. In fiscal 2016, 457 patents were filed, totaling 3,421 held by the Osaka Gas Group, including patents for upstream gas production, distribution and supply, and downstream gas appliances and material technologies. The intellectual property rights that we possess are used for business and are actively licensed to other companies.

In addition, we are careful to acquire trademarks for services and products we offer and protect company brands. As of March 31, 2017 the Osaka Gas Group holds 1,056 trademarks.

### Strengthening Intellectual Property throughout the Group

We employ a variety of educational and instructional tools to further improve Osaka Gas Group employees'

understanding of intellectual property rights. For example, instructors from both inside and outside the Company conduct training sessions based on both goals and employee career level. We also publish an email magazine and distribute the latest news articles on relevant topics.



# Corporate Social Responsibility (CSR) Activities

# Osaka Gas Group CSR Promotion System

As its policy for conducting business activities, the Osaka Gas Group has adopted the creation of value for customers as its number one priority, which in turn links to the creation of value for society, value for shareholders, and value for employees. We believe that conducting our operations with fairness and transparency and generating these four types of value is the way to fulfill the Group's corporate social responsibilities.

We have set forth the Osaka Gas Group CSR Charter to serve as activity guidelines for Group executives and employees, with the aim of satisfying stakeholder expectations, fulfilling our social responsibilities as a business enterprise, and ensuring the sustainable development of the Osaka Gas Group.

To promote CSR, we have set up the CSR Promotion Council, under the supervision of the president and primarily consisting of executives, to deliberate on CSR plans and activity reports. We have furthermore established the CSR Committee, comprised of the heads of relevant business units and led by the CSR executive, an officer who manages all of the Group's CSR activities, to coordinate and advance CSR activities across the organization. In these ways we are pursuing the appropriate and proactive execution of CSR activities.

#### **CSR Indicators and Initiative Results**

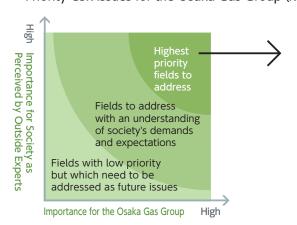
The Osaka Gas Group established CSR indicators for each of its CSR Charter priorities in 2009 to help promote and visually quantify CSR initiatives. Starting with FY2017, we have revised some of the target values based on past efforts and are promoting efforts to take initiatives to a higher level.

# Study and Determination of Materiality in CSR

As an integrated energy provider, the Osaka Gas Group considers it necessary to recognize and manage the possible and actual effects on society of its business activities. As part of the social responsibility of the Osaka Gas Group, we classify our business activities with respect to important aspects, i.e. materiality, and conduct management as appropriate.

In FY2017 we are reviewing the materiality identified in FY2013 based on the current business climate and social trends.

#### Priority CSR Issues for the Osaka Gas Group (Materiality)



- Customer health and safety
- Safety labeling of products and services
- Energy consumption
- Atmospheric emissions
- Water discharge and waste
- Environmental evaluation of suppliers
- Mechanisms for handling grievances concerning the environment
- Regional communities
- Assessment of the impact that suppliers have on society

- Mechanisms for handling grievances concerning impact on society
- Customer privacy
- Supplier human rights evaluation
- Mechanisms for handling grievances concerning human rights
- Supplier labor practice evaluation
- Mechanisms for handling grievances concerning labor practices
- Financial performance

#### Promotion of Women's Advancement in the Workplace

At Osaka Gas, we believe that giving female employees the opportunity to thrive is of critical importance at a time when the domestic working population is declining. Based on the Osaka Gas Group Diversity Promotion Policy, we are striving to create workplace environments that allow women to pursue employment where they can make full use of their skills.

Efforts to promote work-life balance are yielding results. Our female employees are actively engaged in a wide range of workplaces, depending on their preferences and aptitudes, including gas production, supply, and marketing, and we have also received external recognition for these efforts. In FY2015, we were awarded the Osaka City Mayor's Award (First Prize) for Leading Companies in Promoting Female Employment, and were designated a "Nadeshiko Brand" for the fourth consecutive year in March 2017. The ratio of women in managerial positions\* hit 3.8% in April 2017.

We are promoting various efforts and bolstering systems to achieve the goal of having 5% or more of managerial positions held by women by FY2020.

\* Managerial positions: Manager level (section manager) positions or higher





In March 2017, Osaka Gas was selected as a "Nadeshiko Brand" for the fourth consecutive year among listed companies for actively promoting the advancement of women in the workplace.

Activities and results are to be revised for those of FY2016.

#### **CSR Charter & CSR Indicators**

CSR Charter	CSR Indicators / Key Performance Indicators	FY2016 Results
I Creating value for customers  The Osaka Gas Group is committed to making a positive contribution to realizing a higher level of comfort and development in the business activities of its customers. We intend to achieve this objective through the provision of a reliable and safe supply of natural gas and other forms of energy with an improved level of services for our customers. We also pursue the development of new, useful products and services to generate new value as we strive to continue forward growth alongside our customers.	Customer satisfaction survey: Seven customer service duties Overall satisfaction rate of 91% or more  86% or more in each category	91.7% At least 88% in each category
Harmonizing with the environment and contributing to realizing a sustainable society  Addressing the issues of the environment both at regional and global levels is of paramount importance for the Osaka Gas Group, which is engaged primarily in the energy business. Seriously aware of the impacts of each of our business activities on the environment, we seek to harmonize our businesses with the environment and efficiently utilize energy and other resources, thereby contributing to a sustainable society.	Environmental management indicator  ● Environmental management efficiency ¥58 /1,000 m³ or less by FY2016	¥52.5 /1,000 m³
Being a good corporate citizen contributing to society  The Osaka Gas Group strives to maintain communication with society and the communities it serves in order that its business activities be accurately understood by the world. We achieve this while carrying out proactive disclosure of information and seeking improved managerial transparency. We intend to make positive		2,341 58,316
contributions to society, fulfilling our role of being a good corporate citizen.	Social contribution activities  Number of activities implemented: 600 or more	1,066
IV Complying with laws and regulations and respect for human rights  The thorough compliance with laws and regulations by all executives and employees sets the stage for gaining society's trust as a healthy corporate group. Our perspectives on compliance go beyond legal and regulatory boundaries to include decent conduct expected of all citizens. Based on a respect for human rights, we intend to maintain	Compliance awareness survey scores  (Individual) Level of understanding of the Code of Conduct: Higher than previous year  (Organization) Degree of penetration of compliance: Higher than previous year  Percentage of employees receiving compliance training.	3.2 points lower than previous year (70.6%) 1.0 points higher than previous year (87.6%)
equitable relationships with our customers, business partners, and other parties.	Percentage of employees receiving compliance training  100%	100%
V Management policy for human growth  Along with ensuring employment opportunities, the Osaka Gas Group also strives to realize the growth of its employees through work by respecting employees' individuality and initiative. We support employees so that they are able to carry out work with a sense of purpose and grow as individuals, pursuing the creation of new value for customers, shareholders, and society.	<ul> <li>Employee awareness survey</li> <li>Maintaining sufficient levels in job satisfaction and loyalty to the company</li> </ul>	Survey not conducted in FY2016 FY2014 performance (Satisfaction: 3.85/5-point scale) (Loyalty: 4.38/5-point scale)

#### **Inclusion in SRI Indices**

Osaka Gas was included in the following socially responsible investment (SRI) indices and an investment universe as of the end of July 2017. Additionally, Osaka Gas meets the stands of and was included in the ESG indices selected by the Government Pension Investment Fund (GPIF).

**Dow Jones Sustainability Indices** 

Dow Jones Sustainability Indices In Collaboration with RobecoSAM 🐽

MSCI SRI Indexes\*2

MSCI 🛞 | 2017 Constituent MSCI SRI Indexes

FTSE4Good\*1 FTSE4Good

MSCI ESG Leaders Indexes\*2

MSCI 🛞

2017 Constituent MSCI ESG Leaders Indexes

MS-SRI



\*1 FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company) confirms that Osaka Gas Co., Ltd. has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series. Created by the global index provider FTSE Russell, FTSE4Good is an equity index series that is designed to facilitate investment in companies that meet globally recognised corporate responsibility standards. Companies in the FTSE4Good Index Series have met stringent environmental, social and governance criteria, and are positioned to capitalise on the benefits of responsible business practice. http://www.ftse.com/products/indices/FTSE4Good

Ethibel EXCELLENCE

Investment

Register

For more detailed information about the CSR activities of the Osaka Gas Group, consult the Osaka Gas Group CSR Report or the CSR section of the Osaka Gas website:



http://www.osakagas.co.jp/ csr\_e/index.html

 $^{*}2$  The inclusion of Osaka Gas Co., Ltd. in any MSCI Index, and the use of MSCI logos, trademarks, service marks or index names herein, does not constitute a sponsorship, endorsement or promotion of Osaka Gas Co., Ltd. by MSCI or any of its affiliates. The MSCI Indexes are the exclusive property of MSCI. MSCI and the MSCI index names and logos are trademarks or service marks of MSCI or its affiliates.

https://www.msci.com/esg-integration

# Corporate Governance



Representative Director Tetsuo Setoguchi

Representative Director and Chairman Hiroshi Ozaki

Representative Director Hidetaka Matsuzaka

Takehiro Honjo

Representative Director Masataka Fujiwara

# **Basic Stance Toward Corporate Governance**

Osaka Gas believes it is important to achieve sustainable growth and increase medium and long-term corporate value by engaging in fair and transparent business activities. To achieve this, the Company looks to respond appropriately to the exercising of shareholder rights, work toward maintaining and increasing a sense of trust by dialogue and cooperation with its stakeholders, and enhance the level of the entire Group's corporate social responsibility (CSR). Further, the Group looks to respond swiftly to changes in the Group's business environment and continuously improve and strengthen its corporate governance so that transparent, fair and decisive decisions can be made and efficient and appropriate actions can thereby be implemented.

### Corporate Governance Promotion Organization and Activities

#### 1 General Meeting of Shareholders

To allow shareholders time to carefully consider proposed resolutions, Osaka Gas sends out its shareholder meeting notifications early (about four weeks in advance of the meeting). Before sending out convocation notices, the Company discloses them on the website of the Tokyo Stock Exchange and on the Company's website. The Company has adopted an electronic voting system in which voting rights can be exercised electronically over the Internet.

#### **2** Board of Directors, Directors of the Company

The Board of Directors consists of 13 directors (including three outside directors). Its mission is to make swift and appropriate decisions about important matters that affect the whole Group including subsidiaries and to enhance supervisory capabilities. It met a total of 13 times in FY2016 and had an attendance rate of 99.4%. There was adequate time for deliberations, and active discussions were conducted.

### 3 Executive Officers

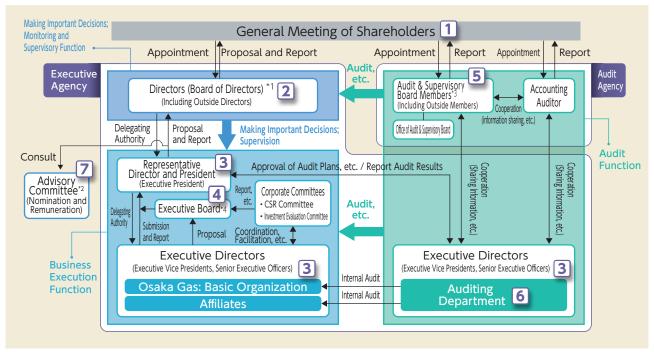
Osaka Gas has adopted an executive officer system, which enables the Directors of the Company to focus on decision-making and monitoring and supervisory functions, and worked toward strengthening the business efficiency and the supervisory functions by dynamically mobilizing the Board of Directors. Executive officers perform duties determined by the Board of Directors, and some Representative Directors and Directors concurrently serve as executive officers to make management decision-making more accurate and efficient.

#### 4 Executive Board

Osaka Gas examines basic management policies and important management issues through the Executive Board and fully deliberates the foregoing before decision-making. In accordance with internal regulations, the Executive Board consists of the Executive President, Executive Vice Presidents, Senior Executive Officers, Heads of Corporate Headquarters, and Heads of Business Division. In principle, CSR Promotion Meetings are held three times a year by the Executive Board, which deliberate on plans for CSR activities and make reports on CSR activities.

#### **Corporate Governance Organization Chart**

(As of June 29, 2017)



- \*1 Board of Directors: 13 directors (10 internal directors and 3 outside directors)
- \*2 Advisory Committee: 3 outside directors, 3 outside Audit & Supervisory Board Members, Representative Director and President and persons appointed by the President (up to two members who are Representative Directors)

#### 5 Audit & Supervisory Board, Audit & Supervisory Board Members

Osaka Gas has chosen the organizational form as a company with an Audit & Supervisory Board. The Audit & Supervisory Board consists of five Audit & Supervisory Board Members, of whom three are outside auditors and each Audit & Supervisory Board Member monitors the execution of work duties by the Directors. The Office of Audit & Supervisory Board with a dedicated full-time staff of four which is not under the direct control of the directors has been established to support the Audit & Supervisory Board Members' auditing work and thus improve the auditing system.

### 6 Auditing Department

Osaka Gas has established the Auditing Department (with a staff of 20) that functions as an internal auditing division. Based on an annual auditing plan, it evaluates from an independent and objective standpoint the conformance to standards and efficiency of business activities and the appropriateness of institutions and standards. In addition to giving recommendations and conducting follow-ups that lead to business improvements in the organizations subject to audit, the department summarizes the issues and reports its results to the Executive Board.

Audit & Supervisory Board Members accounting auditors and the Auditing Department meet on a regular basis to discuss annual audit plans and audit reports, and also convene as required to exchange audit information. This facilitates audit coordination and helps improve audit effectiveness and quality.

- \*3 Audit & Supervisory Board: 5 Audit & Supervisory Board Members (2 full-time Audit & Supervisory Board Members, 3 outside Audit & Supervisory Board Members)
- \*4 Executive Board: 1 Executive President, 3 Executive Vice Presidents and 8 Senior Executive

#### **7** Advisory Committee

Matters concerning the appointment of directors and Audit & Supervisory Board Members and the remuneration of directors shall be decided based on deliberations by this advisory committee whose outside officers occupy a majority, from the viewpoint of ensuring objectivity and transparency in the decision process.

#### Risk Management

In the Osaka Gas Group, organizational heads of the Company and presidents of the affiliated companies promote the management of the risk of losses and periodically conduct risk management assessments. Each basic organization or affiliated company uses the Gas Group Risk Management System (G-RIMS) to ascertain risks, inspect the status of compliance with those risks, and conduct follow-up activities.

Regarding the management of risks concerning security and disaster prevention which are common to the Group, the organization in charge is clearly specified, and the organization supports each basic organization and affiliated company to ensure risk management on a Group-wide basis. To prepare for emergencies, regulations for disaster countermeasure and business continuity plans are prepared.

# **Directors**



Representative Director and Chairman

Hiroshi Ozaki



President Takehiro Honjo



Representative Director Hidetaka Matsuzaka



Representative Director Tetsuo Setoguchi



Representative Director Masataka **Fujiwara** 



Director Kazuhisa Yano



Director Toshimasa Fujiwara



Director Tadashi Miyagawa



Director Hideaki Nishikawa



Director Takeshi Matsui

Outside Director

Miyahara

Hideo



Outside Director Shunzo Morishita



1970.4 Joined Nippon Telegraph and Telephone Public Corporation
2004.3 Representative Director and President of Nippon Telegraph and Telephone West Corporation

2008.6 Director and Executive Advisor of Nippon Telegraph and Telephone West Corporation

Director of the Company (current)

2010.6 Executive Advisor of Nippon Telegraph and Telephone West Corporation 2012.6 Chairman of the Board of Directors of Hanshin Expressway Company Limited (current)

2014.7 Senior Advisor at Nippon Telegraph and Telephone West Corporation 2014.10 Commissioner of the Osaka Prefectural Public Safety Commission

2015.3 NHK Board of Governors (current)

Board of Directors Meetings Attendance Record (April 1, 2016–March 31, 2017) Attended 13 of 13 meetings of the Board of Directors.



1989.10 Professor, Faculty of Engineering, Osaka University
1998.4 Dean of the Graduate School of Engineering, Dean of the Faculty of Engineering, Osaka University

2002.4 Dean of the Graduate School of Information Science and Technology, Osaka University

President of Osaka University

2007.9 President of the National Institute of Information and Communications Technology

Representative Director of Knowledge Capital Association (current)

2013.4 Specially Appointed Professor, Graduate School of Information Science

and Technology, Osaka University
Director of West Japan Railway Company (current) Director of the Company (current)

Visiting Professor, Graduate School of Information Science and 2016.4 Technology, Osaka University (current)

2016.6 NHK Board of Governors (current)

Board of Directors Meetings Attendance Record (April 1, 2016-March 31, 2017) Attended 12 of 13 meetings of the Board of Directors.



Outside Director Takayuki Sasaki

Biography

1970.4 Joined Japanese National Railways 2002.6 President, West Japan Railway Daily Service Net Company Co., Ltd.

2007.6 Vice President, West Japan Railway Company 2009.6 Vice Chairman, West Japan Railway Company

2009.8 President, West Japan Railway Company

2012.5 Chairman, West Japan Railway Company
 2016.6 Senior Advisor, West Japan Railway Company (current)

2016.6 Director of the Company (current)

Board of Directors Meetings Attendance Record (April 1, 2016-March 31, 2017) After being appointed on June 29, 2016, attended 11 of 11 meetings of the Board of Directors.

# **Audit & Supervisory Board Members**



Audit & Supervisory **Board Members** Takahiko Kawagishi



Audit & Supervisory **Board Members** Akihiko



Outside Audit & Supervisory **Board Members** Yoko

Kimura

Biography

1987.12 Assistant Professor, Faculty of Home Economics, Nara Women's University

1993.10 Assistant Professor, Faculty of Human Life and Environment, Nara Women's University

Professor, Faculty of Human Life and Environment, Nara

Women's University 2004.12 Member of Local Public Finance Council

2010.4 Chairperson of the Board of Directors, Council of Local Authorities for International Relations

2014.4 Advisor of Japan Center for Cities 2014.6 Audit & Supervisory Board Members

2015.4 Director, Nara Prefectural University (current)

Board of Directors Meetings Attendance Record (April 1, 2016-March 31, 2017)

Attended 13 of 13 meetings of the Board of Directors. Attended 14 of 14 meetings of the Audit & Supervisory Board.



Biography

1996.4

2009.4

2015.6

2015.6

Outside Audit & Supervisory **Board Members** 

Eiji Hatta

Professor, Faculty of Economics, Doshisha University (current)

Vice Chairman, Japan University Auditors Association (current)

Chairman, Japan Student Baseball Association (current)

Vice President, Baseball Federation of Japan (current)

Board of Directors Meetings Attendance Record

. Attended 13 of 13 meetings of the Board of Directors.

Director, Japan High School Baseball Federation (current)

Dean, Faculty of Economics, Doshisha University

President, Doshisha University

Audit & Supervisory Board Members

President, The Doshisha (current)

2017 4 Chancellor The Doshisha (current)

(April 1, 2016-March 31, 2017)

2011.10 Chancellor, The Doshisha



Outside Audit & Supervisory **Board Members** 

Shigemi Sasaki

Biography

1974.4 Appointed as judge 2011.5 Chief Judge, Takamatsu High Court

2012.3 Chief Judge, Osaka High Court

2013.3 Retired from judgeship

2013.4 Professor, Graduate School of Law, Kyoto University

2016.6 Audit & Supervisory Board Members

Board of Directors Meetings Attendance Record (April 1, 2016–March 31, 2017)

After being appointed on June 29, 2016, attended 11 of 11 meetings of the Board of Directors. Attended 11 of

11 meetings of the Audit & Supervisory Board.

# Attended 14 of 14 meetings of the Audit & Supervisory Board.

To ensure objectivity and transparency in the decision-making process, the amount of remuneration for each director is determined by a resolution of the Board of Directors after deliberations by the Advisory Committee, the majority of whose members are outside directors. The amount falls within the scope (up to a maximum of ¥63 million per month) approved at the General Meeting of Shareholders. The decision reflects the position and responsibilities of each director, and takes into consideration the levels of pay at other companies. To improve motivation for achieving sustainable growth and increasing corporate value over the medium to long term, remuneration for directors is paid as a monthly amount comprised of a fixed portion and a portion based directly on the company's performance (consolidated) over the last three years. The Advisory Committee consists of outside and internal members. The outside members are all of the outside officers (three outside directors and three outside Audit & Supervisory Board Members), while the internal members are the president and individuals appointed by the president as deemed necessary (up to two other representative directors can be appointed). The head of the committee is elected by the members of the committee.

Director and Audit & Supervisory Board Members Remuneration

The amount of remuneration paid to each Audit & Supervisory Board Members is determined following deliberations by Audit & Supervisory Board Members. The amount falls within the scope (up to a maximum of ¥14 million per month) approved at the Annual Shareholders' Meeting and reflects the position of each Audit & Supervisory Board Members.

Retirement bonuses for directors and Audit & Supervisory Board Members have been discontinued.

Note (1): Outside directors receive fixed remuneration, as they are independent of business execution. Note (2): Directors (excluding outside directors) contribute a fixed amount from their monthly remuneration and purchase their own shares through the directors' shareholding association.

# Criteria for Determining the Independence of Outside Directors and Outside Audit & Supervisory Board Members

Osaka Gas appoints three outside directors and three outside Audit & Supervisory Board Members. The selection of candidates for the position of director or Audit & Supervisory Board Members is made from a large pool of individuals in consideration of their knowledge, experience, expertise, and character. In addition, candidates for outside director are also screened for their independence and ability to make objective decisions, wide range of insight, wealth of experience, and high level of expertise in their field of specialization. Outside directors participate in decision-making as members of the Board of Directors' meetings, and monitor and supervise the execution of duties of the managing directors from an independent position based on their knowledge and experience. Outside Audit & Supervisory Board Members use their knowledge and experience to conduct strict audits on the execution of duties of the managing directors, also from an independent standpoint. Both outside directors and outside Audit & Supervisory Board Members will hear about a variety of issues at Board of Directors' meetings, including the operation of internal control systems based on the Companies Act, the evaluation of internal controls as they relate to financial reports based on the Financial Instruments and Exchange Act, internal audits, and CSR activities. They will also confirm the content of accounting audit reports.

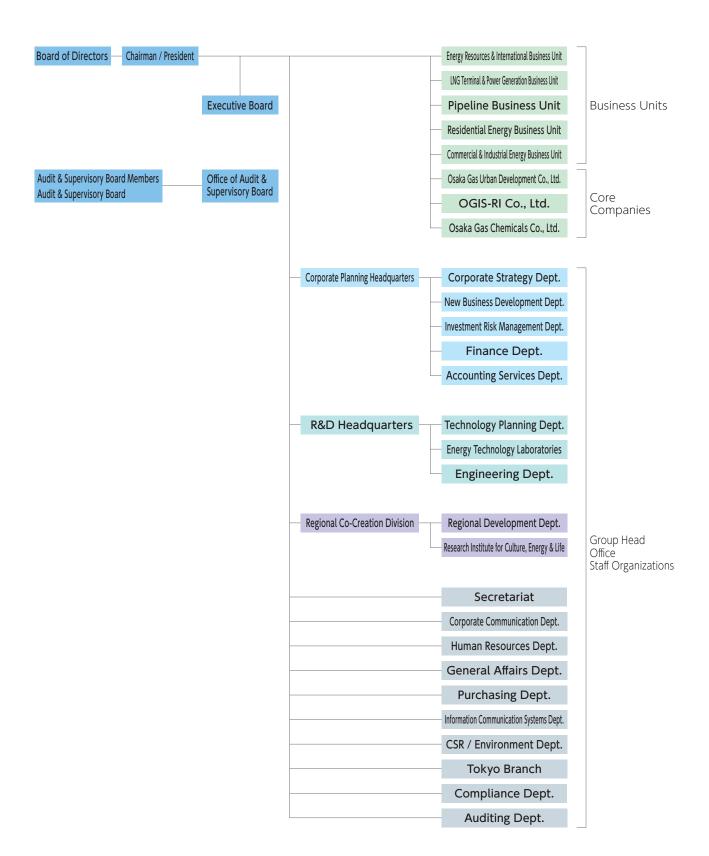
In addition, outside directors Shunzo Morishita, Hideo Miyahara, Takayuki Sasaki, and outside Audit & Supervisory Board Members Yoko Kimura, Eiji Hatta, and Shigemi Sasaki have no special interest relationships with the company affecting decision-making, and they meet the company's criteria for the independence of outside officers, so they are judged to have sufficient independence. Based on this, they are reported as independent officers to the financial instruments exchanges on which the company is listed.

Classification	Total amount of remuneration (million yen)	Number of payees
Directors (excluding outside directors)	512	14
Audit & Supervisory Board Members (excluding outside, members)	66	3
Outside directors and outside Audit & Supervisory Board Members	62	7

Note: The number of persons and amounts include four directors and two Audit & Supervisory Board Members (including one outside Audit & Supervisory Board Members) who retired as of the close of the Company's 198th Annual Shareholders' Meeting held on June 29, 2016. Moreover, the total amount of remuneration is made up of a total amount and basic remuneration.

# Osaka Gas Group Organization

As of July 1, 2017



Note: Please see p. 66 for main consolidated subsidiaries

# **Financial Section**

- 51 Summary of Consolidated Operating Results
- 53 Management's Discussion and Analysis
- 59 Consolidated Balance Sheets
- 61 Consolidated Statements of Income
- **62** Consolidated Statements of Comprehensive Income
- 63 Consolidated Statements of Changes in Net Assets
- 65 Consolidated Statements of Cash Flows

# Summary of Consolidated Operating Results

Osaka Gas Co., Ltd. and Consolidated Subsidiaries Fiscal years ended March 31, 2007 through 2017

	2007.3	2008.3	2009.3	2010.3	
Financial Data	2007.3	2000.3	2009.3	2010.3	
Net sales	¥1,174,456	¥1,238,145	¥1,326,785	¥1,096,628	
Operating income	93,729	75,611	66,932	91,140	
Profit before income taxes	88,078	72,478	64,510	82,572	
Profit attributable to owners of parent	52,929	40,283	36,041	48,384	
Capital expenditure	95,267	111,087	106,087	98,246	
Depreciation and amortization	84,031	95,253	86,549	95,402	
R&D expenses	9,906	10,178	9,603	10,670	
Total assets	1,405,682	1,467,934	1,452,457	1,483,895	
Equity	668,887	648,592	612,566	666,689	
Interest-bearing liabilities	487,827	566,441	573,483	539,081	
Cash flows from operating activities	98,354	134,282	120,691	229,714	
Cash flows from investing activities	(99,765)	(132,029)	(108,102)	(111,265)	
Cash flows from financing activities	(22,009)	12,495	(3,438)	(49,553)	
Number of shares issued and outstanding (thousands)	2,235,669	2,158,383	2,158,383	2,158,383	
Per Share Data (yen and U.S. dollars)					
Earnings per share (EPS)	¥ 23.77	¥ 18.27	¥ 16.72	¥ 22.50	
Book value per share (BPS)	300.61	300.76	284.21	310.39	
Annual dividends	7.00	7.00	7.00	7.00	
Key Ratios					
Net worth / Total assets	47.6%	44.2%	42.2%	44.9%	
Debt equity ratio (times)	0.73	0.87	0.94	0.81	
Return on assets (ROA)	3.8%	2.8%	2.5%	3.3%	
Return on equity (ROE)	8.1%	6.1%	5.7%	7.6%	
Gas sales volume (million m³)	8,764	8,917	8,416	8,150	
Number of meters installed (thousands)	6,848	6,913	6,971	7,009	
Number of employees	16,435	16,682	19,009	19,268	

<sup>1.</sup> The translation of Japanese yen amounts into U.S. dollar amounts is based on the prevailing exchange rate at March 31, 2017, which was ¥112.19 to U.S. \$1.0.

<sup>2.</sup> Net worth / Total assets = Equity / Total assets (as of the end of the fiscal years ended March 31)
3. Debt equity ratio = Interest-bearing liabilities / Equity (as of the end of the fiscal years ended March 31)
4. Return on assets (ROA) = Net income / Total assets (average)
5. Return on equity (ROE) = Net income / Average equity
6. Financial information is stated in accordance with the standards of the securities report but not audited.

						Millions of Yen	Thousands of U.S. Dollars
2011.3	2012.3	2013.3	2014.3	2015.3	2016.3	2017.3	2017.3
¥1,187,142	¥1,294,781	¥1,380,060	¥1,512,581	¥1,528,164	¥1,322,012	¥1,183,846	\$10,552,161
88,584	77,274	84,773	99,381	105,065	146,674	97,250	866,836
81,587	75,694	84,630	81,874	121,428	122,865	91,596	816,439
45,968	45,207	52,467	41,725	76,709	84,324	61,271	546,136
69,600	87,171	112,987	124,146	119,398	114,418	88,657	790,246
97,569	93,624	82,818	83,806	87,785	86,747	86,206	768,399
10,918	10,974	10,875	11,793	11,434	11,340	10,374	92,468
1,437,297	1,475,759	1,566,899	1,668,317	1,862,201	1,829,756	1,886,577	16,815,916
664,959	684,584	747,802	798,964	888,496	906,623	961,905	8,573,899
532,493	541,349	540,199	573,586	633,923	567,164	540,668	4,819,218
126,399	122,793	129,597	154,225	156,908	281,819	148,801	1,326,335
(82,408)	(107,764)	(116,791)	(175,591)	(110,704)	(144,198)	(137,527)	(1,225,844)
(41,257)	(8,279)	(27,897)	4,163	22,892	(90,716)	(50,530)	(450,404)
2,083,400	2,083,400	2,083,400	2,083,400	2,083,400	2,083,400	2,083,400	_
¥ 21.62	¥ 21.71	¥ 25.20	¥ 20.04	¥ 36.86	¥ 40.53	¥ 29.46	\$ 0.263
319.33	328.77	359.16	383.90	426.98	435.85	462.54	4.123
8.00	8.00	8.50	9.00	9.50	10.00	10.00	0.089
46.3%	46.4%	47.7%	47.9%	47.7%	49.5%	51.0%	_
0.80	0.79	0.72	0.72	0.71	0.63	0.56	_
3.1%	3.1%	3.4%	2.6%	4.3%	4.6%	3.3%	_
6.9%	6.7%	7.3%	5.4%	9.1%	9.4%	6.6%	_
8,560	8,711	8,534	8,554	8,290	8,052	8,694	_
7,041	7,074	7,114	7,164	7,224	7,280	7,338	_
19,684	19,818	19,870	21,250	20,982	20,844	20,762	_

# Management's Discussion and Analysis

# 1. Operating Environment

In the fiscal year ended March 31, 2017, the Japanese economy witnessed a global economic rebound attended by a moderate increase in crude oil prices. Although improvements in personal consumption were late in coming, progressing yen depreciation and rising stock prices aided corporate capital expenditure along with thriving exports and production levels, leaving the ongoing firm recovery trend intact.

Going forward, downside risks including trends in US fiscal policy measures and the slowdown in the Chinese economy will require attention. However, aided by factors in support of domestic demand, such as economic stimulus measures of the Japanese government gaining full momentum, prospects are for the Japanese economy to keep on a recovery track.

Meanwhile, domestic energy markets experienced a

drop in demand due to developments such as demographic contraction in Japan and the offshoring of factories. Additionally, starting in April 2017, full deregulation of gas retailing went into force following on from the full deregulation of electric power retailing in April 2016. Furthermore, crude oil prices and global LNG demand, among other factors, served to increase risks such as uncertainty surrounding the LNG procurement environment.

\*Although the fluctuation in LNG prices may be offset by the Fuel Cost Adjustment System, under which gas rates are revised to reflect changes in fuel costs, a time lag before the actual adjustment is made or changes in the composition of fuel suppliers could affect the business performance of the Group.

#### 2.Summary of Results for the Fiscal Year Ended March 31, 2017, and Outlook for the Fiscal Year Ending March 31, 2018

Consolidated net sales for the fiscal year ended March 31, 2017 decreased by ¥138.1 billion (-10.5%) year-on-year to ¥1,183.8 billion. This was primarily due to the lower unit selling price of city gas under the fuel cost adjustment system of the Gas Business.

Consolidated ordinary income decreased by ¥38.7 billion (-28.7%) year-on-year to ¥96.2 billion, primarily due to a decrease in the influence caused by a time lag of fluctuation of raw material costs which is reflected in unit selling price of city gas, compared to the previous fiscal year. However, net of the time-lag gain/loss, ordinary income increased thanks to cost reductions at the gas business and higher earnings at the International Energy Business.

Profit attributable to owners of parent decreased by ¥23.0 billion (-27.3%) year-on-year to ¥61.2 billion.

Consolidated net sales for the fiscal year ending March

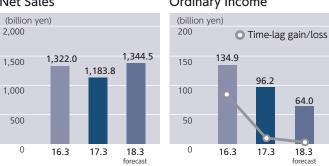
31, 2018 are expected to be increased by ¥160.6 billion (+13.6%) year-on-year to ¥1,344.5 billion. This is mainly based on an assumption that LNG prices will be higher compared to the current fiscal year, attributable to a rise in the unit selling prices of city gas under the fuel cost adjustment system.

Ordinary income is expected to decrease by ¥32.2 billion (-33.5%) year-on-year to ¥64.0 billion, primarily due to a decrease in the influence caused by a time lag of fluctuation of raw material costs reflected in unit selling price of city gas, lower earnings at the International Energy Business, and effects from the full deregulation of gas retailing.

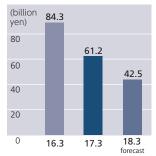
Profit attributable to owners of parent is expected to decrease by ¥18.7 billion (-30.6%) year-on-year to ¥42.5 billion.







#### Net Profit Attributable to Owners of Parent



	16.3	17.3	18.3 forecast
Crude oil price (\$/bbl)	48.7	47.5	55.0
Exchange rate (yen/\$)	120.2	108.3	115.0

#### 3. Summary of Results for the Fiscal Year Ended March 31, 2017, and Outlook for the Fiscal Year Ending March 31, 2018, by Business Segment

#### (1) Summary of Results for the Fiscal Year Ended March 31, 2017

#### 1) Gas Segment

Net sales decreased by ¥146.1 billion (-15.4%) year-on-year to ¥802.3 billion. This was primarily due to a lower unit selling price of city gas under the fuel cost adjustment system of the Gas Business.

Segment income decreased by ¥47.6 billion (-49.7%) year-on-year to ¥48.1 billion. This was primarily due to a decrease in the influence caused by a time lag of fluctuation of raw material costs that is reflected in unit selling prices of city gas, compared to the same period of the previous fiscal year.

#### 2) LPG, Electricity and Other Energy

Net sales increased by ¥2.5 billion (+1.3%) year-on-year to ¥209.0 billion, primarily due to an increase in sales of the Electricity Business.

Segment income decreased by ¥6.7 billion (-23.5%) year-on-year to ¥22.0 billion, mainly due to a decrease in profits of the Electricity Business.

#### 3) International Energy

Net sales increased by ¥3.9 billion (+21.0%) year-on-year to ¥22.6 billion, mainly due to the start of production of LNG in the Gorgon Project in Australia.

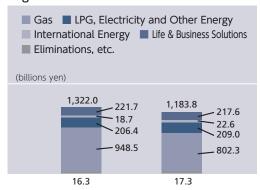
Segment income increased to ¥7.4 billion (compared with a loss of ¥200 million in the previous fiscal year), mainly due to an increase in profits of equity in earnings from North Sea oil.

#### 4) Life & Business Solutions

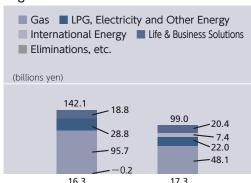
Net sales decreased by ¥4.1 billion (-1.9%) year-on-year to ¥217.6 billion, primarily due to the sales decrease of the Material Solutions Business.

Segment income increased by ¥1.5 billion (+8.4%) year-on-year to ¥20.4 billion, mainly due to a profit increase in Real Estate Business.

#### Segment Net Sales



#### Segment Income



#### (2) Outlook for the Fiscal Year Ending March 31, 2018

Osaka Gas group has reconfigured its business divisions in accordance with the management policies formulated in the group's long-term management vision and medium-term business plan "Going Forward Beyond Borders," combined with a review of reportable segments effective from the first quarter of the fiscal year ending March 31, 2018.

The outlook for the fiscal year ending March 31, 2018, based on the reviewed reportable segments, is as follows.

#### 1) Domestic Energy: Gas Operations

Net sales are expected to increase by ¥108.2 billion (+11.9%) year-on-year to ¥1,019.5 billion, mainly due to the higher unit selling price of city gas under the fuel cost adjustment system of the Gas Business.

Segment income is expected to decrease by ¥26.2 billion (-47.5%) year-on-year to ¥29.0 billion, primarily due to a decrease in the influence caused by a time lag of fluctuation of raw material costs reflected in unit selling price of city gas, as well as a decline in the sales volume of city gas.

#### 2) Domestic Energy: Electricity Operations

Net sales are expected to increase by ¥59.4 billion (+55.3%) year-on-year to ¥167.0 billion, mainly due to an increase in the sales volume of electricity.

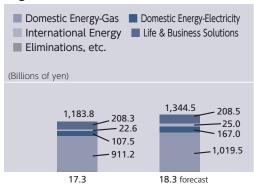
Segment income is expected to decrease by ¥2.2 billion (-13.6%) year-on-year to ¥14.0 billion, primarily due to the effects of intensifying competition.

#### 3) International Energy

Net sales are projected to increase ¥2.3 billion (+10.5%) compared with the previous fiscal year to ¥25.0 billion mainly due to higher production at the Gorgon Project in Australia.

Segment income is projected to decrease ¥4.0 billion (-50%)

#### Segment Net Sales

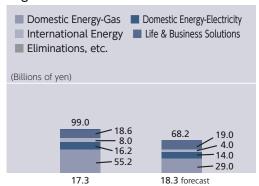


to ¥4.0 billion mainly due to effects from the Freeport Project.

#### 4) Life & Business Solutions

Net sales and segment income are projected to post results at the levels of the previous fiscal year.

#### Segment Income



#### 4. Sales of Gas and Electric Power

# (1) Summary of Results for the Fiscal Year Ended March 31, 2017

### (i) Non-consolidated Gas Sales Volume

Non-consolidated gas sales volume of Osaka Gas increased 8.0% from the previous fiscal year to 8,660.42 million m<sup>3</sup>.

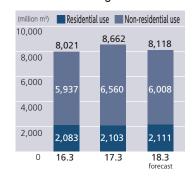
Gas sales volume for residential use increased 0.9% compared with the previous fiscal year to 2,103 million m<sup>3</sup>. With air and water temperatures trending lower during the winter compared with the previous fiscal year, hot water and room heating demand posted gains.

Gas sales volume for non-residential use increased 10.5% compared with the previous fiscal year to 6,560 million m<sup>3</sup> mainly due to large-scale demand development.

#### (ii) Electricity Sales Volume

Electricity sales volume increased 5.2% compared with the previous fiscal year to 8,948 million kWh, mainly due to higher retail sales volume.

#### Non-consolidated gas sales volume



### (2) Forecast for the Fiscal Year Ending March 31, 2018 (i) Non-consolidated Gas Sales Volume

Non-consolidated gas sales volume of Osaka Gas is projected to decrease 6.3% compared with the previous fiscal year to 8,118 million m<sup>3</sup>.

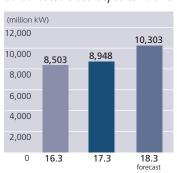
The sales volume of gas for residential use, assuming average-year air temperatures, is projected to increase 0.4% compared with the previous fiscal year to 2,111 million m<sup>3</sup> due to higher demand for hot water given lower first-half air and water temperatures than in the previous fiscal year.

Gas sales volume for non-residential use is projected to decrease 8.4% compared with the previous fiscal year to 6,008 m<sup>3</sup> due to lower power generation demand, the effects of deregulation, and the shift in the counting method from large-lot gas supply to own use associated with the end of independent power producer agreements.

#### (ii) Electricity Sales Volume

Electricity sales volume is projected to increase 15.1% compared with the previous fiscal year to 10,303 million kWh mainly due to higher retail sales volume.

#### Consolidated electricity sales volume



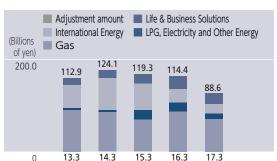
#### 5. Analysis of Assets, Liabilities, and Net Assets and Financial Policies

#### (1) Analysis of Assets, Liabilities, and Net Assets

Total assets as of March 31, 2017, marked ¥1,886.5 billion, marking an increase of ¥56.8 billion compared with the end of the previous fiscal year, mainly due to a ¥91.3 billion increase in non-current assets due to an increase in investment securities. Current assets decreased ¥34.5 billion compared with the end of the previous fiscal year, reflecting mainly lower cash and deposits.

Liabilities as of March 31, 2017, totaled ¥894.7 billion, marking an increase of ¥0.7 billion compared with the end of the previous fiscal year. Net assets as of March 31, 2017, marked ¥991.8 billion, which was ¥56.0 billion higher than at the end of the previous fiscal year. The main factor was a ¥40.2 billion increase in shareholders' equity from higher retained earnings, with accumulated other comprehensive income ¥15.0 billion higher than at the end of the previous fiscal year mainly due to an increase in remeasurements of defined benefit

As a result of the foregoing, the shareholders' equity ratio as of the end of



\* Beginning with the fiscal year ended March 31, 2015, consistent with the content of operations, the Renewable Energy Business has been transferred to the LPG, Electricity and Other Energy Segment and the International Energy Segment.

### (3) Financial Policies

Osaka Gas group has established management performance indicators under its long-term management vision 2030 and medium-term business plan 2020 "Going Forward Beyond Borders" formulated in March 2017. As indicators for financial soundness to be maintained over the medium and long terms, the plan calls for a consolidated debt equity ratio (the ratio of interest-bearing liabilities to equity) of around 0.7 and a consolidated shareholders' equity ratio of around 50%.

To date, Osaka Gas group has implemented measures to enhance the cash efficiency of the group overall through the introduction of cash management systems (CMS) and measures to enhance the efficiency of invested capital such as reducing interest-bearing liabilities and purchasing own stock through the proactive use of free cash flows. Furthermore, through efforts

#### Total Assets, Net Assets, Net Worth/Total Assets



the fiscal year ended March 31, 2017, posted 51.0%, marking an increase of 1.4 percentage points compared with the end of the previous fiscal year.

#### (2) Capital Expenditure

Facility investment at Osaka Gas Group steadily responds to shifts in demand for gas and helps ensure stable and viable production and supply systems for urban energy supply. Moreover, Osaka Gas group engages in facility investment also in fields outside the gas operations with a view to the development of new businesses.

Capital expenditure in the fiscal year ended March 31, 2017, totaled ¥88.6 billion, which was ¥25.7 billion less than in the previous fiscal year. This decline is due to reduced facility investment in the gas segment (regarding production facilities), the LPG, Electricity and Other Energy Segment (regarding power generation facilities), and in the International Energy Segment (regarding upstream operations facilities).

#### Pipeline extensions



such as financial risk management designed to hedge swings in sales and earnings resulting from a variety of risks associated with the execution of operations, Osaka Gas group has been taking steps to maintain and enhance the group's financial soundness.

As a result, interest-bearing liabilities as of March 31, 2017, decreased ¥26.4 billion compared with the end of the previous fiscal year, while equity increased on the back of higher retained earnings, with a consolidated debt-to-equity ratio of 0.56 and a consolidated shareholders' equity ratio of 51.0 underscoring sustained financial soundness.

Going forward, in order to realize the objectives of the long-term management vision 2030 and the medium-term business plan 2020, Osaka Gas group will continue to make proactive efforts such as further enhancement of cash efficiency and capital efficiency and financial risk management.

#### Equity, Interest-Bearing Liabilities, Debt Equity Ratio



#### 6. Overview of Cash Flows

Net cash provided by operating activities during the fiscal year ended March 31, 2017, totaled ¥148.8 billion, which was ¥133.0 billion lower than in the previous fiscal year. Main factors were a decrease in profit before income taxes and a decline in accrued consumption taxes, etc. compared with the previous fiscal year.

Net cash used in investing activities totaled ¥137.5 billion, which as ¥6.6 billion lower than in the previous fiscal year. Main factors were a decline in expenditure for the acquisition of property, plant, and equipment compared with the previous fiscal year, and a reduction compared with the previous fiscal year in expenditure for long-term loans.

Net cash used in financing activities totaled ¥50.5 billion, which was ¥40.1 billion lower than in the previous fiscal year. Main factors were a decrease compared with the previous fiscal in expenditure for the redemption of corporate bonds and an increase compared with the previous fiscal year in income from the issuance of corporate bonds.

Based on the foregoing, net decrease in cash and cash equivalents in the period under review including conversion differences totaled ¥42.4 billion. Cash and cash equivalents at the end of the period under review totaled ¥166.9 billion.

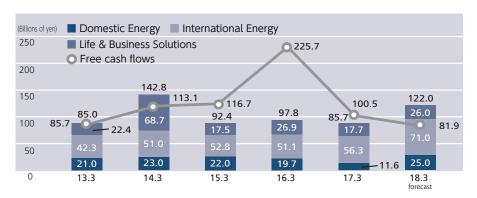
(Billions of yen)

	2016.3	2017.3	Change
Cash flows from operating activities	281.8	148.8	-133.0
Cash flows from investing activities	-144.1	-137.5	+6.6
Cash flows from financing activities	-90.7	-50.5	+40.1
Net increase (decrease) in cash and cash equivalents	46.5	-42.4	-89.0
Cash and cash equivalents at the end of the year	209.3	166.9	-42.4
Free cash flows	225.7	100.5	-125.2

#### 7. Fluctuation in Free Cash Flows and Investment in Business Growth

Free cash flows in the fiscal year ended March 31, 2017, totaled ¥100.5 billion, a ¥125.2 billion decrease compared to the previous fiscal year. This is mainly due to a decrease in cash from operating activities caused by weaker effects from the time-lag until changes in raw materials prices are reflected in unit prices for sales of city gas. Investment in business growth implemented in the amount of ¥85.7 billion centered on investment in the International Energy business.

Free cash flows in the fiscal year ending March 31, 2018, are projected to decrease ¥18.5 billion compared with the previous fiscal year to ¥81.9 billion. This is mostly due to a drop in cash provided by operating activities caused by weaker effects from the time-lag until changes in raw materials prices are reflected in unit prices for sales of city gas. Investment in business growth planned with the focus on investment in the International Energy business is projected at ¥122.0 billion.



#### 8. Ratings

Osaka Gas recognizes that improving fund-raising competitiveness is an important issue in a sound financial strategy. Osaka Gas has established indicators for financial soundness that address aspects of financial health such as the maintenance of credit agency ratings, aiming to improve fund-raising competitiveness while striking a balance with returning earnings to shareholders through dividend payments and share buybacks, etc.

Currently, Osaka Gas has been rated AA and Aa by foreign credit rating

agencies, and AA by a domestic credit rating agency. Going forward, the Company will continue to ensure that it possesses a sound financial standing.

#### Credit Ratings (As of March 31, 2017)

R&I	AA+
Moody's	Aa3
Standard & Poor's	AA-

#### 9. Business Risks and Risk Countermeasures

Osaka Gas group is taking steps to address the following risks and makes efforts to minimize the effects from risks impinging upon operations through measures such as currency and raw-materials derivatives, various types of insurance coverage including disaster damage insurance, security enhancements for IT core systems, enforcement of compliance and information management, appropriate information maintenance and monitoring of the status of the execution of operations, security and accident prevention measures, and business continuity planning and reviewing.

#### ■ Risks Related to All Businesses within the Osaka Gas Group

#### a.Changes in economic, financial, and social conditions as well as market contraction

A decrease in net sales, difficulties in fund-raising, insolvency of partner companies, Japan's shrinking population or the transfer of manufacturing overseas, due to worsening economic, financial, and social conditions in the economies of Japan and/or other countries

#### b.Changes in foreign exchange rates and borrowing rates

#### c.Occurrence of catastrophic disasters, accidents, or infectious diseases

Occurrence of catastrophic natural disasters, terrorist events, accidents, or infectious disease epidemics such as new strains of influenza or other diseases

#### d. Changes in politics, laws and regulations, and institutional systems

Changes in international rules concerning the environment, the public, and corporate governance, as well as changes in the Gas Business Act, the Electricity Business Act, the Companies Act, the Financial Instruments and Exchange Act, environment, industrial health and safety, and human rights-related laws or other standards, policies, laws and regulations, and institutional systems in Japan and/or other countries

#### e. Intensifying competition

Intensified competition with other operators in business areas related to the Group

### f. Breakdown or malfunction of critical IT systems Breakdown or malfunction of critical IT systems, such as systems related to gas production/supply or billing

#### g. Quality issues with products or services

Expenditures to resolve quality problems relating to products or services handled by the Group or damage to the Group's social reputation thereof

#### h. Information leaks

External leaks of important information used in the course of the Group's business, including customer information or technical information possessed by the Group

#### i. Non-compliance with laws and regulations

Damage to social reputation and costs arising following acts carried out by the Group or by any person related to the Group in violation of any law or regulation

#### Sensitivity

#### a. Crude oil prices

An increase of 1US\$/bbl in the crude oil price may reduce consolidated ordinary income in the fiscal year ending March 31, 2018, by approximately ¥1.0 billion.

#### b. Foreign exchange

An increase of ¥1.0 in the yen/dollar rate may reduce consolidated ordinary income in the fiscal year ending March 31, 2018, by ¥0.9 billion.

#### c. Interest

An increase of 1% in payable interest may reduce consolidated non-operating income and expenditure (net) for the fiscal year ending March 31, 2018, by ¥0.4 billion.

#### Risks Related to Major Businesses

#### 1) Domestic energy business

#### a. Impact of fluctuations in temperature/water temperature on energy demand

Sensitivity: A change of one degree centigrade in air or water temperatures may change the sales volume of gas for household use in the spring/fall, summer, and winter seasons by approximately by 7%, 8%, and 6%, respectively.

#### b. Changes in raw fuel costs

Fluctuation in raw fuel costs due to changes in crude oil prices, foreign exchange rates, renewal of contracts and price negotiation trends with fuel suppliers, and other relevant factors\*

Although the fluctuation in LNG prices may be offset by the Fuel Cost Adjustment System, under which gas rates are revised to reflect changes in fuel costs, a time lag before the actual adjustment is made or changes in the composition of fuel suppliers could affect the business performance of the Group.

#### c. Difficulty in procuring raw fuels

Problems with the facilities of LNG (raw fuel from which gas or electricity are produced) suppliers or their operations, or other incidents

#### d. Difficulties in gas production and supply

Disruption of the production or supply of gas due to catastrophic natural disaster or accidents

#### e. Difficulties in power generation or supply

Any difficulties in power generation or supply due to a natural disaster, accident, problems with fuel purchasing or other incidents

#### f. Gas equipment and facility issues

Serious problems with gas equipment or facilities

g. Intensifying competition in the industry and the resulting increase in choices available to consumers

#### 2) International energy business

Changes in the operating environment, such as decreased profitability or project delay or cancellation, resulting from the public policies, implementation of or changes in regulations, deterioration of economic or social conditions, or technical problems in the countries in which the Group operates

# **Consolidated Balance Sheets**

Osaka Gas Co., Ltd. and Consolidated Subsidiaries March 31, 2016 and 2017

March 31, 2016 and 2017		Millions of Yen	Thousands of U.S. Dollars
	2016	2017	2017
Assets			
Non-current Assets			
Property, plant and equipment			
Production facilities	¥ 89,192	¥ 91,943	\$ 819,533
Distribution facilities	297,424	286,889	2,557,175
Service and maintenance facilities	60,257	58,912	525,109
Other facilities	291,836	387,286	3,452,054
Construction in progress	172,949	87,706	781,763
Total property, plant and equipment	911,659	912,737	8,135,637
Intangible assets			
Total intangible assets	89,613	77,483	690,649
Investments and other assets Investment securities	236,774	316,981	2,825,394
Net defined benefit asset	25,154	38,615	344,195
Other	51,729	60,073	535,461
Allowance for doubtful accounts	(1,811)	(1,376)	(12,266)
Total investments and other assets	311,846	414,293	3,692,785
Total non-current assets	1,313,119	1,404,514	12,519,072
Current Assets			
Cash and deposits	209,982	167,583	1,493,749
Notes and accounts receivable - trade	167,246	177,512	1,582,252
Lease receivables and lease investment assets	16,127	24,147	215,238
Inventories	79,782	69,778	621,963
Other	44,607	44,670	398,166
Allowance for doubtful accounts	(1,110)	(1,629)	(14,527)
Total current assets	516,636	482,062	4,296,843
Total assets	¥1,829,756	¥1,886,577	\$16,815,916

Abilities  Non-current liabilities  Bonds payable  Long-term loans payable	2016 ¥ 184,975 300,588	2017 ¥ 194,979	2017
Non-current liabilities  Bonds payable  Long-term loans payable	,	¥ 194 979	
Bonds payable Long-term loans payable	,	¥ 19/1979	
Long-term loans payable	,	¥ 194 979	
	300,588	T 157,575	\$ 1,737,943
		267,666	2,385,830
Deferred tax liabilities	21,864	26,451	235,773
Provision for gas holder repairs	1,649	1,416	12,625
Provision for safety measures	12,549	10,897	97,130
Provision for investment loss	6,999	6,999	62,393
Provision for loss on guarantees	1,757	_	_
Provision for equipment warranties	8,377	14,282	127,307
Net defined benefit liability	18,145	18,709	166,764
Other	37,725	91,033	811,423
Total non-current liabilities	594,633	632,436	5,637,194
Current liabilities			
Current portion of non-current liabilities (Note 8)	54,521	50,267	448,054
Notes and accounts payable - trade	53,882	50,246	447,870
Short-term loans payable	25,916	23,118	206,067
Income taxes payable	33,834	22,942	204,494
Other	131,181	115,695	1,031,242
Total current liabilities	299,336	262,269	2,337,729
otal liabilities	893,970	894,706	7,974,924
et Assets			
Shareholders' equity			
Capital stock	132,166	132,166	1,178,061
Authorized - 3,707,506,909*			
Issued - 2,083,400,000 shares in 2016 and 2017			
Capital surplus	19,320	19,319	172,199
Retained earnings	712,401	752,872	6,710,688
Treasury shares	(1,275)	(1,492)	(13,306)
3,256,640 shares in 2016 and			
3,764,066 shares in 2017			
Total shareholders' equity	862,613	902,865	8,047,642
Accumulated other comprehensive income			
Valuation difference on available-for-sale securities	44,143	51,678	460,634
Deferred gains and losses on hedges	(12,347)	(9,500)	(84,680)
Revaluation reserve for land	(737)	(737)	(6,577)
Foreign currency translation adjustments	28,924	17,993	160,387
Remeasurements of defined benefit plans	(15,972)	(393)	(3,507)
Total accumulated other comprehensive income	44,010	59,040	526,256
Non-controlling interests	29,162	29,965	267,092
Total net assets	935,786	991,870	8,840,991
otal liabilities and net assets	¥1,829,756	¥1,886,577	\$16,815,916

\*A proposal for a reverse stock split was approved at the annual general meeting of shareholders held on June 29, 2017.

Based on this approval, effective October 1, 2017, the number of authorized shares of the company will change to 700,000,000 and the number of shares issued and outstanding will change to 416,680,000 shares on a calculation basis.

# Consolidated Statements of Income

Osaka Gas Co., Ltd. and Consolidated Subsidiaries Years ended March 31, 2016 and 2017

		Millions of Yen	Thousands of U.S. Dollars
	2016	2017	2017
Net sales	¥1,322,012	¥1,183,846	\$10,552,161
Cost of sales	814,760	745,139	6,641,762
Gross profit	507,251	438,707	3,910,398
Selling, general and administrative expenses	360,576	341,457	3,043,561
Operating income	146,674	97,250	866,836
Non-operating income			
Interest income	448	386	3,444
Dividend income	3,262	3,163	28,201
Share of profit of entities accounted for using equity method	_	1,785	15,919
Proceeds from facility contribution	604	2,404	21,436
Miscellaneous income	5,552	6,419	57,220
Total non-operating income	9,867	14,160	126,222
Non-operating expenses			
Interest expense	10,003	9,612	85,679
Share of loss of entities accounted for using equity method	4,538	_	_
Miscellaneous expenses	7,012	5,521	49,219
Total non-operating expenses	21,555	15,134	134,899
Ordinary income	134,986	96,276	858,158
Extraordinary income			
Gain on sales of non-current asset	2,467	_	_
Total extraordinary income	2,467	_	_
Extraordinary losses			
Impairment loss	14,588	1,744	15,553
Business structure improvement expenses	_	2,935	26,166
Total extraordinary losses	14,588	4,680	41,719
Profit before income taxes	122,865	91,596	816,439
Income taxes - current	43,394	31,622	281,866
Income taxes - deferred	(5,478)	(3,233)	(28,822)
Total income taxes	37,916	28,388	253,043
Profit	84,949	63,207	563,395
Profit attributable to non-controlling interests	624	1,936	17,259
Profit attributable to owners of parent	¥ 84,324	¥ 61,271	\$ 546,136
	-		

		Yen	
	2016	2017	2017
Amounts per share of capital stock			
Profit	¥40.53	¥29.46	\$0.263
Cash dividends applicable to the year	10.00	10.00	0.089

# Consolidated Statements of Comprehensive Income

Osaka Gas Co., Ltd. and Consolidated Subsidiaries Years ended March 31, 2016 and 2017

		Thousands of U.S. Dollars	
	2016	2017	2017
Profit	¥84,949	¥63,207	\$563,395
Other comprehensive income			
Valuation difference on available-for-sale securities	(6,736)	7,543	67,242
Deferred gains and losses on hedges	(3,926)	1,401	12,490
Foreign currency translation adjustments	(4,078)	(7,506)	(66,910)
Adjustment for employee retirement benefits	(22,528)	15,593	138,988
Share of other comprehensive income of associates accounted for using equity method	(9,422)	(2,209)	(19,692)
Total other comprehensive income	(46,692)	14,822	132,118
Comprehensive income	¥38,256	¥78,029	\$695,514
Attributable to:			
Owners of parent	¥39,452	¥76,301	\$680,105
Non-controlling interests	¥ (1,196)	¥ 1,728	\$ 15,409

# Consolidated Statements of Changes in Net Assets

Osaka Gas Co., Ltd. and Consolidated Subsidiaries Years ended March 31, 2016 and 2017

ΛΛil	lions	$\circ$ f	Von

			Shareholders' equ	iity		
Year ended March 31, 2016	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity	
Balance at beginning of current period	¥132,166	¥19,488	¥648,896	¥(938)	¥799,613	
Amount change of current pe	eriod					
Dividends of surplus			(20,808)		(20,808)	
Profit attributable to owners of parent			84,324		84,324	
Purchase of treasury shares	5			(357)	(357)	
Disposal of treasury shares		4		20	25	
Change of scope of equity	method		(11)		(11)	
Change in treasury shares of pare transactions with non-controlling		(173)			(173)	
Net changes of items other shareholders' equity	r than					
Total changes of items during period	d _	(168)	63,504	(336)	62,999	
Balance at end of current period	¥132.166	¥19.320	¥712,401	¥(1,275)	¥862.613	

#### Millions of Yen

			Shareholders' equ	iity		
Year ended March 31, 2017	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity	
Balance at beginning of current period	¥132,166	¥19,320	¥712,401	¥(1,275)	¥862,613	
Amount change of current p	eriod					
Dividends of surplus			(20,800)		(20,800)	
Profit attributable to owners of paren	t		61,271		61,271	
Purchase of treasury share	es .			(226)	(226)	
Disposal of treasury share	S	0		9	` 9 <sup>'</sup>	
Change of scope of equity	method				_	
Change in treasury shares of partransactions with non-controlling		(1)			(1)	
Net changes of items othe shareholders' equity	er than					
Total changes of items during perio	od —	(0)	40,470	(217)	40,251	
Balance at end of current period	¥132,166	¥19,319	¥752,872	¥(1,492)	¥902,865	

			Shareholders' equ	ity		
Year ended March 31, 2017	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity	
Balance at beginning of current period	\$1,178,061	\$172,207	\$6,349,956	\$(11,366)	\$7,688,858	
Amount change of current pe	eriod					
Dividends of surplus			(185,403)		(185,403)	
Profit attributable to owners of parent			546.136		546.136	
Purchase of treasury shares	5		,	(2,021)	(2,021)	
Disposal of treasury shares		3		81	85	
Change of scope of equity	method				_	
Change in treasury shares of pare transactions with non-controlling		(12)			(12)	
Net changes of items other shareholders' equity	than					
Total changes of items during period	<del>_</del>	(8)	360,732	(1,939)	358,783	
Balance at end of current period	\$1,178,061	\$172,199	\$6,710,688	\$(13,306)	\$8,047,642	

#### Millions of Yen

	Accumulated other comprehensive income						
Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Non-controlling interests	Total net assets
¥50,868	¥(6,519)	¥(737)	¥39,341	¥5,929	¥88,882	¥30,373	¥918,869
							(20,808) 84,324
							(357) 25 (11)
							(173)
(6,724)	(5,827)		(10,417)	(21,902)	(44,871)	(1,211)	(46,083)
(6,724)	(5,827)	_	(10,417)	(21,902)	(44,871)	(1,211)	16,916
¥44,143	¥(12,347)	¥(737)	¥28,924	¥(15,972)	¥44,010	¥29,162	¥935,786

#### Millions of Yen

	Accumulated other comprehensive income							Total not
	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustments			Non-controlling interests	Total net assets
	¥44,143	¥(12,347)	¥(737)	¥28,924	¥(15,972)	¥44,010	¥29,162	¥935,786
								(20,800) 61,271 (226) 9
								(1)
	7,535	2,846		(10,930)	15,578	15,030	802	15,832
	7,535	2,846	_	(10,930)	15,578	15,030	802	56,084
<u>'</u>	¥51,678	¥(9,500)	¥(737)	¥17,993	¥(393)	¥59,040	¥29,965	¥991,870

#### Thousands of U.S. Dollars

		Accumi	ulated other co	mprehensive in	come	Non controlling	Total not
Valuation difference on available-for-sale securiti		Revaluation reserve for land	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Non-controlling interests	Total net assets
\$393,471	\$(110,054)	\$(6,577)	\$257,816	\$(142,368)	\$392,287	\$259,937	\$8,341,083
							(185,403) 546,136 (2,021) 85 —
							(12)
67,163	25,374		(97,429)	138,860	133,969	7,154	141,124
67,163	25,374	_	(97,429)	138,860	133,969	7,154	499,908
\$460,634	\$(84,680)	\$(6,577)	\$160,387	\$(3,507)	\$526,256	\$267,092	\$8,840,991

# Consolidated Statements of Cash Flows

Osaka Gas Co., Ltd. and Consolidated Subsidiaries Years ended March 31, 2016 and 2017

Cash flows from operating activities         Y122,865         Y91,596         \$816,439           Profit before income taxes         Y122,865         Y91,596         \$816,439           Depreciation         86,747         86,206         768,399           Amortization of long-term prepaid expenses         5,369         5,389         48,039           Impairment loss         14,588         1,744         15,553           Business structure improvement expenses         —         2,935         26,166           Proceeds from facility contribution         (604)         (2,404)         (2,1436           Increase (decrease) in provision for equipment warranties         5,482         5,904         52,633           Increase (decrease) in in orte defined benefit asset         409         8,221         73,281           Interest expense         10,003         9,612         85,679           Shares of loss (profit) of entities accounted for using equity method         4,538         (1,785)         (15,919           (Increase) decrease in inventories         24,346         9,166         81,704           Increase (decrease) in accrued expenses         (6,294)         (96         8,634           Increase (decrease) in accrued expenses         (6,294)         (96         8,634	rears ended March 51, 2010 and 2017		Millions of Yen	Thousands of U.S. Dollars
Profit before income taxes		2016	2017	2017
Profit before income taxes	Cash flows from operating activities			
Amortization of long-term prepaid expenses 5,369 5,389 48,039 Impairment loss 14,588 1,744 15,553 Business structure improvement expenses — 2,935 26,166 Proceeds from facility contribution (604) (2,404) (21,436) Increase (decrease) in provision for equipment warranties 5,482 5,904 52,633 Increase (decrease) in net defined benefit asset 409 8,221 73,281 Interest and dividend income (3,711) (3,550) (31,645) Interest expense 10,003 9,612 85,679 Shares of loss (profit) of entities accounted for using equity method 4,538 (1,785) (15,919) (Increase) decrease in notes and accounts receivable - trade 23,852 (11,151) (99,400) (Increase) decrease in inventories 24,346 9,166 81,704 Increase) decrease in inventories 24,346 9,166 81,704 Increase (decrease) in accrued expenses (6,294) (968) (8,634) Increase (decrease) in accrued expenses (6,294) (968) (8,634) Increase (decrease) in accrued expenses (6,294) (968) (8,634) Increase (decrease) in accrued consumption taxes, etc. (415) (11,776) (104,973) Miscellaneous 37,257 7,563 67,418 Subtotal 322,161 193,274 1,722,744 Interest and dividends income received 6,387 7,700 (8,641) Increase spaid (10,224) (9,657) (86,078) Income taxes paid (10,224) (9,657) (86,078) Income taxes paid (35,504) (42,516) (378,972) Net cash provided by (used in) Operating Activities 281,819 148,801 1,326,335 Cash Flows from Investing Activities (10,99,10) (83,435) (743,696) (92,286) Purchase of Intangible assets (7,646) (9,286) (92,286) (92,286) Purchase of Intangible assets (7,646) (9,286) (82,776,60) Purchase of shares of subsidiaries resulting in change in scope of consolidation 414 618 5,516 Payments for sales of shares of subsidiaries resulting in change in scope of consolidation 414 618 5,516 (7,991) (83,612) (1,225,844) (1,225	·	¥122,865	¥91,596	\$816,439
Impairment loss   14,588   1,744   15,553   Business structure improvement expenses   - 2,935   26,166   Proceeds from facility contribution   (604) (2,404) (21,436)   Increase (decrease) in provision for equipment warranties   5,482   5,904   52,633   Increase (decrease) in net defined benefit asset   409   8,221   73,281   Interest and dividend income   (3,711) (3,550) (31,645)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (19,685)   (16,785) (16,785) (19,785) (19,785)   (16,785) (19,	Depreciation	86,747	86,206	768,399
Business structure improvement expenses	Amortization of long-term prepaid expenses	5,369	5,389	48,039
Proceeds from facility contribution         (604)         (2,404)         (2,1436)           Increase (decrease) in provision for equipment warranties         5,482         5,904         52,633           Increase (decrease) in net defined benefit asset         409         8,221         73,281           Interest expense         10,003         9,612         85,679           Shares of loss (profit) of entities accounted for using equity method         4,538         (1,785)         (15,919)           (Increase) decrease in notes and accounts receivable - trade         23,852         (11,151)         (99,400)           (Increase) decrease in inventories         24,346         9,166         81,704           Increase (decrease) in accrued expenses         (6,294)         (968)         (8,634)           Increase (decrease) in accrued expenses         (6,294)         (968)         (8,634)           Increase (decrease) in accrued consumption taxes, etc.         (415)         (11,776)         (104,793)           Miscellaneous         37,257         7,563         67,418           Subtotal         322,161         193,274         1,722,744           Interest and dividends income received         6,387         7,700         68,641           Interest expenses paid         (10,224)         (9,657)         <	Impairment loss	14,588	1,744	15,553
Increase (decrease) in provision for equipment warranties   1,482   1,5904   1,73,281	Business structure improvement expenses	_	2,935	26,166
Increase (decrease) in net defined benefit asset   409   8,221   73,281   Interest and dividend income   (3,711)   (3,550)   (31,645)   Interest expense   10,003   9,612   85,679   Shares of loss (profit) of entities accounted for using equity method   4,538   (1,785)   (15,919)   (Increase) decrease in notes and accounts receivable - trade   23,852   (11,151)   (99,400)   (Increase) decrease in inventories   24,346   9,166   81,704   Increase (decrease) in notes and accounts payable - trade   (2,275)   (3,428)   (30,561)   Increase (decrease) in accrued expenses   (6,294)   (968)   (8,634)   (11,776)   (104,973)   (104,	Proceeds from facility contribution	(604)	(2,404)	(21,436)
Interest and dividend income   (3,711)   (3,550)   (31,645)   Interest expense   10,003   9,612   85,679   Shares of loss (profit) of entities accounted for using equity method   4,538   (1,785)   (15,919)   (Increase) decrease in notes and accounts receivable - trade   23,852   (11,151)   (99,400)   (Increase) decrease in inventories   24,346   9,166   81,704   Increase (decrease) in notes and accounts payable - trade   (2,275)   (3,428)   (30,561)   Increase (decrease) in accrued expenses   (6,294)   (968)   (8,634)   Increase (decrease) in accrued expenses   (6,294)   (968)   (8,634)   Increase (decrease) in accrued consumption taxes, etc.   (415)   (11,776)   (104,973)   (104	Increase (decrease) in provision for equipment warranties	5,482	5,904	52,633
Interest expense Shares of loss (profit) of entities accounted for using equity method Shares of loss (profit) of entities accounted for using equity method (Increase) decrease in notes and accounts receivable - trade (Increase) decrease in inventories (Increase) decrease) in notes and accounts payable - trade (Increase) (decrease) in notes and accounts payable - trade (Increase) (decrease) in accrued expenses (Increase) (decrease) in accrued expenses (Increase) (decrease) in accrued expenses (Increase) (decrease) in accrued consumption taxes, etc. (Increase) (decrease) in accrued consumption taxes, etc. (Increase) (decrease) in accrued expenses (Increase) (decrease) in accrued consumption taxes, etc. (Increase) (decrease) in accrued expenses (Increase) (decrease) (de	Increase (decrease) in net defined benefit asset	409	8,221	73,281
Shares of loss (profit) of entities accounted for using equity method (Increase) decrease in notes and accounts receivable - trade (Increase) decrease in inventories (Increase) decrease in inventories (Increase) decrease) in notes and accounts payable - trade (Increase) decrease) in notes and accounts payable - trade (Increase) (decrease) in accrued expenses (Increase) (decrease) in accrued expenses (Increase) (decrease) in accrued consumption taxes, etc. (Increase) (decrease) in accrued expenses (as, 544 (Increase) (decrease) in accrued consumption taxes, etc. (Increase) (decrease) in accrued to (decrease) in accrued taxes page (decrease) in	Interest and dividend income	(3,711)	(3,550)	(31,645)
(Increase) decrease in notes and accounts receivable - trade       23,852       (11,151)       (99,400)         (Increase) decrease in inventories       24,346       9,166       81,704         Increase (decrease) in notes and accounts payable - trade       (2,275)       (3,428)       (30,561)         Increase (decrease) in accrued expenses       (6,294)       (968)       (8,634)         Increase (decrease) in accrued consumption taxes, etc.       (415)       (11,776)       (104,973)         Miscellaneous       37,257       7,563       67,418         Subtotal       322,161       193,274       1,722,744         Interest and dividends income received       6,387       7,700       68,641         Interest expenses paid       (10,224)       (9,657)       (86,078)         Income taxes paid       (10,224)       (9,657)       (86,078)         Income taxes paid       (36,504)       (42,516)       (378,972)         Net cash provided by (used in) Operating Activities       281,819       148,801       1,326,335         Cash Flows from Investing Activities       (109,910)       (83,435)       (743,696)         Purchase of tangible fixed assets       (109,910)       (83,435)       (743,696)         Purchase of intangible assets       (25,975)       (	Interest expense	10,003	9,612	85,679
(Increase) decrease in inventories       22,346       9,166       81,704         Increase (decrease) in notes and accounts payable - trade       (2,275)       (3,428)       (30,561)         Increase (decrease) in accrued expenses       (6,294)       (968)       (8,634)         Increase (decrease) in accrued consumption taxes, etc.       (415)       (11,776)       (104,973)         Miscellaneous       37,257       7,563       67,418         Subtotal       322,161       193,274       1,722,744         Interest and dividends income received       6,387       7,700       68,641         Interest expenses paid       (10,224)       (9,657)       (86,078)         Income taxes paid       (36,504)       (42,516)       (378,972)         Net cash provided by (used in) Operating Activities       281,819       148,801       1,326,335         Cash Flows from Investing Activities       (109,910)       (83,435)       (743,696)         Purchase of tangible fixed assets       (109,910)       (83,435)       (743,696)         Purchase of intangible assets       (5,383)       (6,463)       (57,610)         Purchase of subsidiaries resulting in change in scope of consolidation       (1,998)       (0)       (6,928)         Purchase of shares of subsidiaries resulting in change	Shares of loss (profit) of entities accounted for using equity method	4,538	(1,785)	(15,919)
Increase (decrease) in notes and accounts payable - trade	(Increase) decrease in notes and accounts receivable - trade	23,852	(11,151)	(99,400)
Increase (decrease) in accrued expenses   (6,294)   (968)   (8,634)     Increase (decrease) in accrued consumption taxes, etc.   (415)   (11,776)   (104,973)     Miscellaneous   37,257   7,563   67,418     Subtotal   322,161   193,274   1,722,744     Interest and dividends income received   6,387   7,700   68,641     Interest expenses paid   (10,224)   (9,657)   (86,078)     Income taxes paid   (36,504)   (42,516)   (378,972)     Net cash provided by (used in) Operating Activities   281,819   148,801   1,326,335     Purchase of tangible fixed assets   (109,910)   (83,435)   (743,696)     Purchase of intangible assets   (7,646)   (9,286)   (82,776)     Purchase of long-term prepayment   (5,383)   (6,463)   (57,610)     Purchase of shares of subsidiaries and associates   (25,975)   (32,810)   (292,452)     Purchase of shares of subsidiaries resulting in change in scope of consolidation   (1,998)   (0)   (6)     Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation   414   618   5,516     Payments for sales of shares of subsidiaries resulting in change in scope of consolidation   (7,791)   (5,117)   (45,612)     Other   (14,092   (991)   (8,839)     Net cash provided by (used in) Investing Activities   (144,198)   (137,527)     Cash Flows from Financing Activities   (25,298)   (18,763)   (167,250)     Repayments of long-term loans payable   (25,298)   (18,763)   (167,250)	(Increase) decrease in inventories	24,346	9,166	81,704
Increase (decrease) in accrued consumption taxes, etc. (415) (11,776) (104,973)   Miscellaneous 37,257 7,563 67,418	Increase (decrease) in notes and accounts payable - trade	(2,275)	(3,428)	(30,561)
Miscellaneous         37,257         7,563         67,418           Subtotal         322,161         193,274         1,722,744           Interest and dividends income received         6,387         7,700         68,641           Interest expenses paid         (10,224)         (9,657)         (86,078)           Income taxes paid         (36,504)         (42,516)         (378,972)           Net cash provided by (used in) Operating Activities         281,819         148,801         1,326,335           Cash Flows from Investing Activities         (109,910)         (83,435)         (743,696)           Purchase of tangible fixed assets         (109,910)         (83,435)         (743,696)           Purchase of intangible assets         (7,646)         (9,286)         (82,776)           Purchase of intangible assets         (7,646)         (9,286)         (82,776)           Purchase of shares of subsidiaries resulting in change in scope of consolidation         (109,910)         (83,435)         (743,696)           Purchase of shares of subsidiaries resulting in change in scope of consolidation         (109,910)         (83,276)         (29,2452)           Purchase of shares of subsidiaries resulting in change in scope of consolidation         (11,998)         (0)         (66)           Proceeds from sales of shares of s	Increase (decrease) in accrued expenses	(6,294)	(968)	(8,634)
Subtotal         322,161         193,274         1,722,744           Interest and dividends income received         6,387         7,700         68,641           Interest expenses paid         (10,224)         (9,657)         (86,078)           Income taxes paid         (36,504)         (42,516)         (378,972)           Net cash provided by (used in) Operating Activities         281,819         148,801         1,326,335           Cash Flows from Investing Activities         (109,910)         (83,435)         (743,696)           Purchase of tangible fixed assets         (7,646)         (9,286)         (82,776)           Purchase of intangible assets         (7,646)         (9,286)         (82,776)           Purchase of long-term prepayment         (5,383)         (6,463)         (57,610)           Purchase of shares of subsidiaries and associates         (25,975)         (32,810)         (292,452)           Purchase of shares of subsidiaries resulting in change in scope of consolidation         (1,998)         (0)         (6,62)           Payments for sales of shares of subsidiaries resulting in change in scope of consolidation         414         618         5,516           Payments of long-term loans receivable         (7,791)         (5,117)         (45,612)           Other         14,092	Increase (decrease) in accrued consumption taxes, etc.	(415)	(11,776)	(104,973)
Interest and dividends income received Interest expenses paid Interest expenses paid Income taxes paid	Miscellaneous	37,257	7,563	67,418
Interest expenses paid Income taxes paid Income taxes paid Income taxes paid  Net cash provided by (used in) Operating Activities  Cash Flows from Investing Activities  Purchase of tangible fixed assets Purchase of intangible assets Purchase of long-term prepayment Purchase of shares of subsidiaries and associates Purchase of shares of subsidiaries resulting in change in scope of consolidation Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation Payments for sales of shares of subsidiaries resulting in change in scope of consolidation Payments of long-term loans receivable Other  Net cash provided by (used in) Investing Activities Proceeds from Ing-term loans payable Repayments of long-term loans payable R	Subtotal	322,161	193,274	1,722,744
Income taxes paid  Net cash provided by (used in) Operating Activities  Cash Flows from Investing Activities  Purchase of tangible fixed assets  Purchase of intangible assets  Purchase of long-term prepayment  Purchase of shares of subsidiaries and associates  Purchase of shares of subsidiaries resulting in change in scope of consolidation  Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation  Payments for sales of shares of subsidiaries receivable  Other  Net cash provided by (used in) Investing Activities  Proceeds from long-term loans payable  Repayments of long-term loans payable	Interest and dividends income received	6,387	7,700	68,641
Net cash provided by (used in) Operating Activities281,819148,8011,326,335Cash Flows from Investing Activities(109,910)(83,435)(743,696)Purchase of tangible fixed assets(7,646)(9,286)(82,776)Purchase of intangible assets(7,646)(9,286)(82,776)Purchase of long-term prepayment(5,383)(6,463)(57,610)Purchase of shares of subsidiaries and associates(25,975)(32,810)(292,452)Purchase of shares of subsidiaries resulting in change in scope of consolidation(1,998)(0)(6)Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation4146185,516Payments for sales of shares of subsidiaries resulting in change in scope of consolidation—(41)(366)Payments of long-term loans receivable(7,791)(5,117)(45,612)Other14,092(991)(8,839)Net cash provided by (used in) Investing Activities(144,198)(137,527)(1,225,844)Cash Flows from Financing Activities15,45619,248171,570Repayments of long-term loans payable15,45619,248171,570Repayments of long-term loans payable(25,298)(18,763)(167,250)	Interest expenses paid	(10,224)	(9,657)	(86,078)
Cash Flows from Investing Activities  Purchase of tangible fixed assets  Purchase of intangible assets  Purchase of long-term prepayment  Purchase of shares of subsidiaries and associates  Purchase of shares of subsidiaries and associates  Purchase of shares of subsidiaries resulting in change in scope of consolidation  Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation  Payments for sales of shares of subsidiaries resulting in change in scope of consolidation  Payments of long-term loans receivable  Other  Net cash provided by (used in) Investing Activities  Proceeds from long-term loans payable  Repayments of long-term loans payable  Repayments of long-term loans payable  Repayments of long-term loans payable  (109,910)  (83,435)  (743,696)  (7,646)  (9,286)  (82,776)  (32,810)  (25,975)  (32,810)  (1,998)  (0)  (6)  (6)  (7,791)  (1,998)  (1,998)  (1,21,10)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)  (1,225,844)	Income taxes paid	(36,504)	(42,516)	(378,972)
Purchase of tangible fixed assets Purchase of intangible assets Purchase of intangible assets Purchase of long-term prepayment Purchase of long-term prepayment Purchase of shares of subsidiaries and associates Purchase of shares of subsidiaries resulting in change in scope of consolidation Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation Payments for sales of shares of subsidiaries resulting in change in scope of consolidation Payments of long-term loans receivable Other Pet cash provided by (used in) Investing Activities Proceeds from long-term loans payable Repayments of long-term loans payable Repayments of long-term loans payable Repayments of long-term loans payable (100,910) (10		281,819	148,801	1,326,335
Purchase of intangible assets Purchase of long-term prepayment Purchase of long-term prepayment Purchase of shares of subsidiaries and associates Purchase of shares of subsidiaries resulting in change in scope of consolidation Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation Payments for sales of shares of subsidiaries resulting in change in scope of consolidation Payments of long-term loans receivable Other  Net cash provided by (used in) Investing Activities Proceeds from long-term loans payable Repayments of long-term loans payable  15,456 Payments of long-term loans payable Cash Flows from Financing Activities Proceeds from long-term loans payable Repayments of long-term loans payable (16,463) (25,298) (82,776) (32,810) (292,452) (292,452) (292,452) (293,810) (292,452) (292,452) (294,501) (294,501) (292,452) (294,501)	Cash Flows from Investing Activities			
Purchase of long-term prepayment (5,383) (6,463) (57,610) Purchase of shares of subsidiaries and associates Purchase of shares of subsidiaries resulting in change in scope of consolidation (1,998) (0) (6) Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation 414 618 5,516 Payments for sales of shares of subsidiaries resulting in change in scope of consolidation — (41) (366) Payments of long-term loans receivable (7,791) (5,117) (45,612) Other 14,092 (991) (8,839)  Net cash provided by (used in) Investing Activities (144,198) (137,527) (1,225,844)  Cash Flows from Financing Activities  Proceeds from long-term loans payable 15,456 19,248 171,570 Repayments of long-term loans payable (25,298) (18,763) (167,250)	Purchase of tangible fixed assets	(109,910)	(83,435)	(743,696)
Purchase of shares of subsidiaries and associates Purchase of shares of subsidiaries resulting in change in scope of consolidation Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation Payments for sales of shares of subsidiaries resulting in change in scope of consolidation Payments of long-term loans receivable Other  Net cash provided by (used in) Investing Activities Proceeds from long-term loans payable Repayments of long-term loans payable  15,456 19,248 171,570 (167,250)	Purchase of intangible assets	(7,646)	(9,286)	(82,776)
Purchase of shares of subsidiaries resulting in change in scope of consolidation  Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation  Payments for sales of shares of subsidiaries resulting in change in scope of consolidation  Payments of long-term loans receivable  Other  Net cash provided by (used in) Investing Activities  Proceeds from Iong-term loans payable  Proceeds from long-term loans payable  Repayments of long-term loans payable  (1,298)  (1,298)  (1,298)  (1,298)  (1,298)  (1,298)  (1,298)  (1,298)  (1,298)  (1,298)		(5,383)	(6,463)	(57,610)
Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation  Payments for sales of shares of subsidiaries resulting in change in scope of consolidation  Payments of long-term loans receivable Other  14,092  Net cash provided by (used in) Investing Activities  Proceeds from long-term loans payable Repayments of long-term loans payable  15,456  19,248  171,570  (167,250)	Purchase of shares of subsidiaries and associates	(25,975)	(32,810)	(292,452)
Payments for sales of shares of subsidiaries resulting in change in scope of consolidation Payments of long-term loans receivable Other 14,092 Net cash provided by (used in) Investing Activities (144,198) Cash Flows from Financing Activities Proceeds from long-term loans payable Repayments of long-term loans payable Repayments of long-term loans payable (18,763) (167,250)	Purchase of shares of subsidiaries resulting in change in scope of consolidation	(1,998)	(0)	(6)
Payments of long-term loans receivable       (7,791)       (5,117)       (45,612)         Other       14,092       (991)       (8,839)         Net cash provided by (used in) Investing Activities       (144,198)       (137,527)       (1,225,844)         Cash Flows from Financing Activities       Proceeds from long-term loans payable       15,456       19,248       171,570         Repayments of long-term loans payable       (25,298)       (18,763)       (167,250)	Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation	414	618	5,516
Other 14,092 (991) (8,839)  Net cash provided by (used in) Investing Activities (144,198) (137,527) (1,225,844)  Cash Flows from Financing Activities  Proceeds from long-term loans payable 15,456 19,248 171,570  Repayments of long-term loans payable (25,298) (18,763) (167,250)	Payments for sales of shares of subsidiaries resulting in change in scope of consolidation	_	(41)	(366)
Net cash provided by (used in) Investing Activities(144,198)(137,527)(1,225,844)Cash Flows from Financing Activities15,45619,248171,570Proceeds from long-term loans payable(25,298)(18,763)(167,250)	Payments of long-term loans receivable	(7,791)	(5,117)	(45,612)
Cash Flows from Financing ActivitiesProceeds from long-term loans payable15,45619,248171,570Repayments of long-term loans payable(25,298)(18,763)(167,250)		14,092	(991)	(8,839)
Proceeds from long-term loans payable 15,456 19,248 171,570 Repayments of long-term loans payable (25,298) (18,763) (167,250)		(144,198)	(137,527)	(1,225,844)
Repayments of long-term loans payable (25,298) (18,763) (167,250)				
		(25,298)		(167,250)
	Proceeds from issuance of bonds	_	10,000	89,134
	·			(318,210)
				1,188
	·		(20,803)	(185,433)
				(8,451)
				(32,952)
	<del></del>		(50,530)	(450,404)
				(28,504)
	·			(378,419)
				1,866,188
Cash and Cash Equivalents at the End of Current Period ¥209,367 ¥166,912 \$1,487,769	Cash and Cash Equivalents at the End of Current Period	¥209,367	¥166,912	\$1,487,769

# Major Consolidated Subsidiaries As of March 31, 2017

Segment	Name of subsidiary	Main business	Capital (million yen)	Osaka Ga shareholding (9
Gas	ENETEC KYOTO Co, Ltd.	Sales of gas appliances, residential equipment and appliances, and installation and other services for gas appliances	30	100.0
	Osaka Gas Housing & Equipment Co., Ltd.	Sales of gas appliances /Sales of housing equipment and appliar	ices 450	100.0
	Osaka Gas Customer Relations Co., Ltd.	Maintenance checks on gas equipment and appliances /Checkir Collection of gas bills, and others	g gas meters / 50	100.0
	Osaka Gas Security Service Co., Ltd.	Provision of security and disaster protection s Sales of home security systems	services / 100	100.0
	Kansai Business Information Inc.	Contracting and staffing of call center operati Various research services and consulting	ons / 100	100.0
	Kinpai Co., Ltd.	Gas piping works / Sales of gas appliances, and housing equipment and appliances	300	100.0
	OGCTS Co., Ltd	Sales and construction of energy equipment, heating system supplies, etc.	1,150	100.0
LPG, Electricity and	Osaka Gas LPG Co., Ltd.	Sales of LPG and other products	100	100.0
Other Energy	Nissho Petroleum Gas Corporation	Sales of LPG and other products	1,726	52.5
	Nissho Propane Sekiyu Co., Ltd.	Sales of LPG and other products	60	100.0
	Gas and Power Co., Ltd.	Electric power supply	1,368	100.0
	Senboku Natural Gas Power Generation Co., Ltd.	Electric power supply	2,000	90.0
	Nakayama Nagoya Joint Power Generation Co., Ltd.	Electric power supply	450	95.0
	Osaka Gas Liquid Co., Ltd.	Sales of liquefied nitrogen, liquefied oxygen, liquefied argon, and other products	1,110	100.0
International Energy	Osaka Gas International Transport Inc.	LNG vessel leasing	3,190	100.0
Lifergy	Osaka Gas Australia Pty. Ltd.*	Development and investment of petroleum and natural gas	US\$1,314 million	100.0
	Osaka Gas Gorgon Pty. Ltd.*	Development and investment of petroleum and natural gas	US\$322 million	100.0
	Osaka Gas Ichthys Pty. Ltd.*	Development and investment of petroleum and natural gas	US\$152 million	100.0
	Osaka Gas Ichthys Development Pty. Ltd.*	Development and investment of petroleum and natural gas	US\$149 million	100.0
	Osaka Gas UK, Ltd.*	Investment relating to energy supply business	€134 million	100.0
	Osaka Gas USA Corporation	Development and investment of petroleum and natural gas	US\$1	100.0
Life & Business Solutions	Osaka Gas Chemicals Co., Ltd.*	Manufacture and sales of fine materials, carbon material products, and others	14,231	100.0
	Osaka Gas Urban Development Co., Ltd.	Development, leasing, management, and sales of real estate	1,570	100.0
	Osaka Gas Finance Co., Ltd.	Leasing, credit, insurance agency business, and others	600	100.0
	OG Sports Co., Ltd.	Management and contract operation of sports facilities	100	100.0
	OGIS-RI Co., Ltd.	Software development / Computer-based data processing services	440	100.0
	Sakura Information Systems Co., Ltd.	Software development / Computer-based data processing services	600	51.0
	Jacobi Carbons AB	Manufacture and sales of activated carbon	549,000 Swedish Kronor	100.0

<sup>\*</sup> Specified subsidiary

# Reference Materials and Business Environment

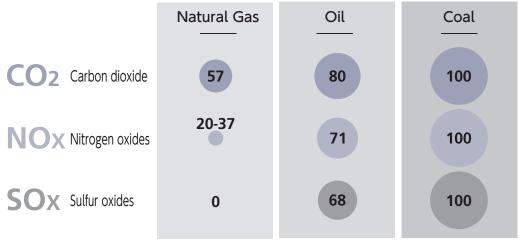
# Characteristics of Natural Gas

#### **Environmental Friendliness of Natural Gas**

Natural gas, a fossil fuel like petroleum and coal, is an energy resource which contains methane as its principal component. A major advantage of natural gas over petroleum and coal is its low emissions of carbon dioxide (CO<sub>2</sub>), a cause of global warming.

When it is burned, natural gas emits only limited amounts of nitrogen oxides (NOx), a contributing factor in air pollution, because of its low nitrogen content, and emits no sulfur oxides (SOx), which are a contributor to acid rain.

#### Comparison of Amount of Emissions with Coal as 100



Sources: (CO<sub>2</sub> figures) The Institute of Applied Energy, "Report on Thermal Power Plant Atmospheric Impact Assessment Technology Demonstration Surveys" (March 1990) (SOx and NOx figures) International Energy Agency (IEA), "Natural Gas Prospects to 2010" 1986)

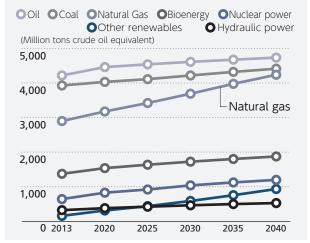
# **Prospects for Natural Gas**

Against a backdrop of increasing demand for energy in emerging countries, the expanding use of natural gas as a non-conventional energy source, and changing conditions in electricity supply and demand in Japan, natural gas has been growing in importance. The International Energy Agency (IEA) predicts that the world's energy demand is going to continue to increase until 2040, and that the percentage of natural gas will increase in the world's primary energy consumption composition mix as we move toward the achievement of low-carbon, efficient energy systems.

# Supply Stability of Natural Gas

Abundant reserves of natural gas have been discovered around the world, making it likely that a stable supply of natural gas will be available to meet growing demand. Proven reserves of natural gas are sufficient to satisfy global demand for more than 50 years.

#### Primary Energy Consumption Forecasts (Global)



Sources: World Energy Outlook 2015 (New Policies Scenario)

# Characteristics of the Gas Business in Japan

# **Gas Pipeline Networks**

Gas pipeline networks have been developed in each region of the country, separate from each other, with no trunk line running throughout the entire country connecting local networks.

Major pipeline network

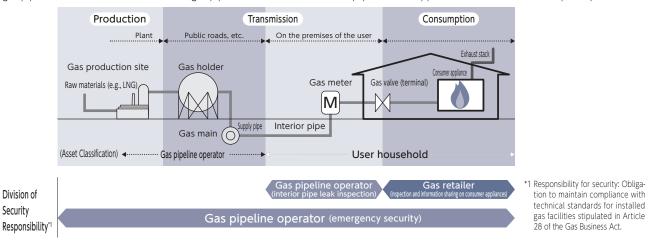


Pipeline open-cut construction work

# Responsibility for Security

Geral gas pipeline operators engaged in the business of maintaining and operating gas pipelines (supply pipes) that connect directly to gas pipes on the premises of customers (interior pipes) have a duty to conduct emergency security checks of consumer gas equipment and appliances and on-site gas pipes and checks for leaks of on-site gas pipes.

Note that gas providers, including new market entrants, have a duty of intercommunication and mutual cooperation at all times during normal operations and in case of emergencies. Moreover, information dissemination to customers concerning the examination of and hazard prevention from consumer gas equipment and appliances has been made compulsory.



# **Fuel Cost Adjustment System**

The purchasing prices of LNG and LPG, both raw materials for the gas supplied to customers, fluctuate in accordance with movements in foreign currency exchange rates and the price of crude oil. The mechanism for determining gas rates is referred to as the Fuel Cost Adjustment System. In addition to reflecting external factors in gas rates, this system is designed

to clarify the results of efforts in enhancing operating efficiency in areas other than raw material costs. Due to its structure, it also causes a time lag before price fluctuations of raw materials are reflected in gas rates, which impacts performance on a single fiscal-year basis. However, these impacts are neutralized over the medium to long term.

#### System Reflecting Changes in Resource Costs in Gas Rates (example)

	Jan.	Feb.	Mar.	Apr.	May	June	July
Large	Average	fuel cost •	One-month time lag	Reflected i	n gas rates		
volume customers			Average	fuel cost 🕒	One-month time lag	Reflected i	n gas rates
Small		Average fuel cost	•	Two-month	time lag	Reflected in gas rates	
volume customers			Average fuel cost	•	Two-month	time lag	Reflected in gas rates

# Company Data

As of June 30, 2017

#### Directory

#### **Head Office**

4-1-2, Hiranomachi, Chuo-ku, Osaka 541-0046, Japan Tel: (+81) 6-6205-4715 (IR Team, Corporate Strategy Dept.)

#### Tokyo Office

Shin-Otemachi Building 6F, 2-2-1, Otemachi, Chiyoda-ku, Tokyo 100-0004, Japan

#### Osaka Gas UK, Ltd.

1st Floor, Carrington House, 126-130 Regent Street, London W1B 5SE, U.K.

#### Osaka Gas USA Corporation (Houston) 2200 Post Oak Blvd, Suite 1500 Houston, TX 77056, U.S.A.

# Osaka Gas USA Corporation (NewYork)

1 North Lexington Avenue, Suite 504, White Plains, NY 10601, U.S.A.

#### Osaka Gas Australia Pty. Ltd.

Level 16, 108 St Georges Terrace, Perth, WA 6000, AUSTRALIA

#### Osaka Gas Singapore Pte. Ltd.

10 Anson Road #19-16 International Plaza Singapore 079903

#### Osaka Gas (Thailand) Co., Ltd.

55 Wave Place Building 10th Floor, Unit10.04, Wireless Road Lumpini Pathumwan, Bangkok 10330 Thailand

Number of shares held Shareholding

#### **Investor Information**

Date of Establishment Regular General Meeting Common Stock

April 10, 1897 Held in June each year

(The 2017 regular general meeting was held on June 29.)

Authorized: 3,707,506,909 shares Issued: 2.083,400,000 shares

Note:

- 1. Total number of shares issued includes 3,764,066 shares of treasury stock.
- 2. The annual general meeting of shareholders held on June 29, 2017, approved a proposal for a reverse stock split. Based on this approval, effective October 1, 2017, the number of authorized shares of the company changes to 700,000,000 and the number of shares issued and outstanding to 416,680,000 shares on a calculation basis.

Listing of Shares Number of Shareholders (As of March 31, 2017) Tokyo Stock Exchange and Nagoya Stock Exchange

93,342

Stock Transaction Units 1,000 shares

Independent Certified KPMG AZSA LLC Public Accountants

Transfer Agent

Mitsui Sumitomo Trust Bank, Limited

Contact

Planning Department

Mitsui Sumitomo Trust Bank, Limited Stock Transfer Agency Business

2-8-4 Izumi, Suginami-ku, Tokyo 168-0063, Japan

ton

Tel: (+81) 120-782-031

The Osaka Gas Co., Ltd. website contains information provided for all investors and is constantly updated.



- For inquiries about this report or requests for other materials, please contact:
- E-mail:keiri@osakagas.co.jp

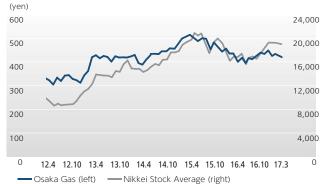
 Please note that we do not accept files attached to e-mails, such as image files.

### Major Shareholders (As of March 31, 2017)

Shareholder	(Thousands)	ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust a/c	99,618	4.78
Nippon Life Insurance Company	96,212	4.62
Japan Trustee Services Bank, Ltd. (Trust a/c)	90,328	4.34
The Bank of Tokyo-Mitsubishi UFJ, Ltd.	69,929	3.36
Resona Bank, Ltd.	52,777	2.53
Japan Trustee Services Bank, Ltd. (Trust a/c 5)	35,652	1.71
STATE STREET BANK WEST CLIENT-TREATY 50523	32,808	1.57
Japan Trustee Services Bank, Ltd. (Trust a/c 9)	30,537	1.47
Aioi Nissay Dowa Insurance Co., Ltd.	29,865	1.43
Meiji Yasuda Life Insurance Company	29,191	1.40

Note: The share ratio is the percentage in respect to the number of shares issued and outstanding (2,083,400,000 shares).

#### Stock Price Range



Unit Con	version List		
Weight			
kg	Metric ton	Imperial (short) ton	U.S. (long)
1 1,000 1,016.0	1×10 <sup>-3</sup> 1 1.0160	0.984×10 <sup>-3</sup> 0.9842 1	1.102×10 <sup>-1</sup> 1.1023 1.1200
907 19	0.9072	0.8927	1

507.15	0.5072	0.0527		
Length				
m	ft	yard	mile	
1	3.2808	1.0936	0.622×10 <sup>-3</sup>	
0.3048	1	0.333	0.189×10 <sup>-3</sup>	
0.9144	3	1	0.568×10 <sup>-3</sup>	
1 609	5 280	1 760	1	

# Volume (Liquid)

	1 /				
m³ (kl)	ft³	Imperial gallon	U.S. gallon		
1	35.315	219.97	264.17		
28.32×10 <sup>-3</sup>	1	6.288	7.481		
4.55×10 <sup>-3</sup>	0.1606	1	1.2011		
3.78×10 <sup>-3</sup>	0.1337	0.8327	1		
1 kl = 6.29 barrels, 1 barrel (42 U.S. gallons) = 0.159 kl					

n³ (N)	m³ (S)	SCF	
	1.055	37.33	
).9476	1	35.37	
0.0268	0.0283	1	
√: 0°C, S:15°C	, SCF :101.33kPa	, 15.5℃(60°F)	
Energy			
cal	Btu	M	kWh
	3.969	4.186×10 <sup>-3</sup>	1.162 ×10 <sup>-3</sup>
).2520	1	1.055×10 <sup>-3</sup>	0.2929×10 <sup>-3</sup>
238.9	948.2	1	0.2778
360.1	3,414	3.600	1
	ıe (Gas)		
Heating Valu	e (Gas) Btu/SCF	MJ/m³ (S)	
Heating Valu	<u> </u>	MJ/m³ (S) 3.97×10 <sup>-3</sup>	
Heating Valu	Btu/SCF	(,	



# Osaka Gas Co., Ltd.

4-1-2, Hiranomachi, Chuo-ku, Osaka 541-0046, Japan http://www.osakagas.co.jp/en/



